ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

MICHAEL ABRACZINSKAS
Director

NORTH CAROLINA
Environmental Quality

DRAFT – September 28, 2020

Mr. Fred L. Taylor II
President
Troy Lumber Company Inc.
110 Leslie Street
Troy, North Carolina 27371

SUBJECT: Air Quality Permit No. 02330T25
Facility ID: 6200029
Troy Lumber Company Inc.
Troy, North Carolina
Montgomery County
Fee Class: Title V
PSD Classification: Major

Dear Mr. Taylor:

In accordance with your completed Air Quality Permit Application for a Significant Prevention of Significant Deterioration (PSD) and a Part II Significant (02Q .0501(b)(2)) modification of your Title V permit, received March 12, 2019 and May 1, 2017, respectively, we are forwarding herewith Air Quality Permit No. 02330T25 to Troy Lumber Company Inc., located at 110 Leslie Street, Troy, Montgomery County, North Carolina, authorizing the construction and operation of the emission source(s) and associated air pollution control device(s) specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code 02Q .0503(8) have been listed for informational purposes as an "ATTACHMENT." Please note the requirements for the annual compliance certification are contained in General Condition P in Section 3. The current owner is responsible for submitting a compliance certification for the entire year regardless of who owned the facility during the year.

As the designated responsible official, it is your responsibility to review, understand, and abide by all of the terms and conditions of the attached permit. It is also your responsibility to ensure that any person who operates any emission source and associated air pollution control device subject to any term or condition of the attached permit reviews, understands, and abides by the condition(s) of the attached permit that are applicable to that particular emission source.

If any parts, requirements, or limitations contained in this Air Quality Permit are unacceptable to you, you have the right to request a formal adjudicatory hearing within 30 days following receipt of this permit, identifying the specific issues to be contested. This hearing request must be in the form of a written petition, conforming to NCGS (North Carolina General Statutes) 150B-23, and filed with both the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, North Carolina 27699-6714 and the Division of Air Quality, Permitting Section, 1641 Mail Service Center, Raleigh, North Carolina 27699-1641. The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Please note that this permit will be stayed in its entirety upon receipt of the

request for a hearing. Unless a request for a hearing is made pursuant to NCGS 150B-23, this Air Quality Permit shall be final and binding 30 days after issuance.

You may request modification of your Air Quality Permit through informal means pursuant to NCGS 150B-22. This request must be submitted in writing to the Director and must identify the specific provisions or issues for which the modification is sought. Please note that this Air Quality Permit will become final and binding regardless of a request for informal modification unless a request for a hearing is also made under NCGS 150B-23.

The construction of new air pollution emission source(s) and associated air pollution control device(s), or modifications to the emission source(s) and air pollution control device(s) described in this permit must be covered under an Air Quality Permit issued by the Division of Air Quality prior to construction unless the Permittee has fulfilled the requirements of NCGS 143-215.108A(b) and received written approval from the Director of the Division of Air Quality to commence construction. Failure to receive an Air Quality Permit or written approval prior to commencing construction is a violation of NCGS 143-215.108A and may subject the Permittee to civil or criminal penalties as described in NCGS 143-215.114A and 143-215.114B.

Montgomery County has triggered increment tracking under PSD for PM_{10} and NO_X. This modification will result in a decrease of 0.189 pounds per hour of PM_{10} emissions and an increase in 8.97 pounds per hour of NO_X.

This Air Quality Permit shall be effective from XXXX, 2020 until January 31, 2021, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein.

Should you have any questions concerning this matter, please contact Judy Lee at 919-707-8729 or judy.lee@ncdenr.gov.

Sincerely yours,

William D. Willets, P. E., Chief, Permitting Section
Division of Air Quality, NCDEQ

Enclosure

c: Lorinda Shepherd – EPA Region IV (permit with review)
Fayetteville Regional Office
Central Files
Connie Horne, Permitting Section (cover letter only)

ATTACHMENT to Permit No. 02330T25

Insignificant Activities per 15A NCAC 02Q .0503(8)

Emission Source ID No.	Emission Source Description
IES-DB	Log debarking
IES-BH	Bark handling
IES-SM	Sawmill
IES-WH	Green wood waste handling
IES-TS	Dry wood shavings transfer system
IES-DS	Dry wood shavings storage silo
IES-TL	Dry wood shavings truck loading
IES-AST1 & IES-AST2	Two double-walled No. 2 fuel oil above ground storage tanks (3,000 gallon capacity)
IES-AST3 & IES-AST4	Two double-walled No. 2 fuel oil above ground storage tanks (2,500 gallon capacity)

1. Because an activity is insignificant does not mean that the activity is exempted from an applicable requirement or that the Permittee is exempted from demonstrating compliance with any applicable requirement.
2. When applicable, emissions from stationary source activities identified above shall be included in determining compliance with the permit requirements for toxic air pollutants under 15A NCAC 02D .1100 “Control of Toxic Air Pollutants” or 02Q .0711 “Emission Rates Requiring a Permit.”
3. For additional information regarding the applicability of MACT or GACT see the DAQ page titled “Specific Permit Conditions Regulatory Guide.” The link to this site is as follows: http://deq.nc.gov/about/divisions/air-quality/air-quality-permits/specific-permit-conditions-regulatory-guide.

Summary of Changes to Permit

The following changes were made to the Troy Lumber Company, Inc. – Troy, NC, Air Permit No. 02330T24:

Page No(s). Verify prior to issuance	**Section**	**Description of Change(s)**
Cover letter	NA	• Updated permit revision and dates • Updated language to match current shell guidance • Added increment emission rates • Revised EPA contact
Cover Letter Attachment	Insignificant Activities	• Added four No. 2 fuel oil above ground storage tanks per Form D4 of application
Cover Letter Attachment	Summary of Changes to Permit	• Updated summary of changes to permit for this modification • Updated permit number
Permit Cover	NA	• Revised permit application numbers and dates
1 – 76	Globally	• Updated permit revision number in header • Updated permit language to match permit shell or current guidance • Modified permit throughout for PSD project • Modified permit throughout to address Part II application (No. 6200029.17A) request to undo changes made during processing of Permit No. T19

Page No(s). Verify prior to issuance	Section	Description of Change(s)
3 – 4	Section 1	• Updated page numbers in table • Removed all reference to Case-by-Case MACT • Added Boiler MACT DDDDD to all boilers • Modified description of Boiler 1 to include underfired stoker per permit review for Initial Title V (issued permit No. T12) • Added wood-fired boiler (ID No. ES-Boiler3) and controls – two multicyclones followed by an electrostatic precipitator • Added wood (sawdust) collection system for Boiler 3 (ID No. ES-WCS-2). Per facility request the ton per hour loading rate will be referred to as boiler feed rate for both wood fuel silos. • Changed description of existing sawmill wood waste collection system discharging to wood fuel silo (ID No. ES-WCS) to remove the word "waste" per facility request • Corrected POS/AOS for No. 2 oil-fired boiler (ID No. ES-Boiler4) that were inadvertently reversed during processing of Permit No. T24 • Modified descriptions of kilns per Form Bs of application – maximum BF rate is 13 thousand BF (MBF) per hour • Added footnote with combined annual BF limit for all kilns • Removed footnotes regarding hybrid operation of kilns and definition per Application No. 6200029.17A • Removed footnote regarding Section 2.3 • Removed footnote regarding ES-Kiln-2 shutdown • Removed footnote regarding ES-Kiln-3 "This emission source (ID No. ES-KILN-3) is listed as a 15A NCAC 02Q .0501(c)(2) modification per application No. 6200029.15B. ..." [Part II consolidated with PSD] • Removed footnote regarding ES-Boiler4 "Boiler4 (ID No. ES-Boiler4) is being modified as a minor modification per 15A NCAC 02Q .0515. …"

Page No(s). Verify prior to issuance	Section	Description of Change(s)
4 – 13	Section 2.1 A	• Modified description of Boiler 1 to include underfired stoker per permit review for Initial Title V (permit T12) • Removed Case-by-Case MACT condition • Removed Boiler MACT exemption • Removed all reference to hybrid operation • Revised testing conditions per current guidance • Added Boiler MACT condition with new requirements for Boiler 1 • Revised PSD Avoidance condition in regulatory table (removed VOC; and added NOx, PM, and CO_2 equivalent)
13 – 22	Section 2.1 B	• Removed Case-by-Case MACT condition • Removed Boiler MACT exemption • Removed all reference to hybrid operation • Revised testing conditions per current guidance • Added Boiler MACT condition with new requirements for Boiler 2 • Revised PSD Avoidance condition in regulatory table (removed VOC; and added NOx, PM, and CO_2 equivalent)
23 – 25	Section 2.1 C	• Added wood (sawdust) collection system for Boiler 3 (ID No. ES-WCS-2) and associated cyclone • Changed description of existing sawmill wood waste collection system discharging to wood fuel silo (ID No. ES-WCS) to remove the word “waste” per facility request • Added PSD Avoidance condition to regulatory table
24	Section 2.1 C.2.c	• Changed monthly observation to weekly per current Title V guidance for this type of source
25 – 29	Section 2.1 D	• Modified kiln descriptions • Added “phase in” language for Kiln 2 • Updated Plywood MACT condition with notification requirements for Kiln 2 restart • Revised PSD Avoidance condition in regulatory table (removed VOC; and added NOx, PM, and CO_2 equivalent) • Added BACT for VOC to regulatory table • Added 02Q .0508(j) alternative operating scenarios • Added applicable regulations per guidance
26 – 27	Section 2.1 D.1 (new)	• Added BACT for VOC based on this PSD project
29	Section 2.1 D.4 and 2.1 D.5	• Added 02D .0515 and 02D .0521 – applicable regulations have inadvertently been left out of previous permits

Page No(s). Verify prior to issuance	Section	Description of Change(s)
30 – 43	Section 2.1 E	• Updated Boiler MACT conditions for Boiler 4 • Added PSD Avoidance condition to regulatory table • Revised testing conditions per current guidance • Added 02D .1806 to regulatory table • Modified 02Q .0508(j) alternative operating scenarios
44 – 54	Section 2.1 F (new)	• Added new section for wood-fired boiler (ID No. ES-Boiler3)
55 – 63	Section 2.2 A	• Updated regulatory table for Facility-wide emission sources • Removed PSD Avoidance for VOC (refer to BACT in Section 2.1 D.1) • Added PSD Avoidance for NOx, PM, and CO_2 equivalent • Added POS/AOS for boilers (ID No. ES-B1 and ES-Boiler2) and No. 2 fuel oil boiler (ID No. ES-Boiler4) as backup
55	Section 2.2 A.1	• No change to odor requirements
55 – 62	Section 2.2 A.2	• Revised PSD Avoidance condition by removing current VOC condition and adding revised condition for NOx, PM, and CO_2 equivalent • Addition of operational limitations/restrictions on boilers • Addition of EFs and equations
63	Section 2.2 A.3	• Added Primary and Alternative Operating Scenarios (POS and AOS) to existing wood-fired boilers (ID Nos. ES-B1 and ES-Boiler2) and the No. 2 fuel oil-fired boiler (ID No. ES-Boiler4) as backup • Added condition that only 3 boilers can operate simultaneously
63	Section 2.3	• Removed - Permit Shield for Non-Applicable Requirements for hybrid kilns. Shield was contingent on conversion to hybrid kilns. • Added condition for Boiler 1 – predates NSPS Dc.
64 – 75	Section 3	• Updated General Conditions to version 5.5, 08/25/2020
76	Permit Attachment	• Updated List of Acronyms

State of North Carolina
Department of Environmental Quality
Division of Air Quality

AIR QUALITY PERMIT

Permit No.	Replaces Permit No.(s)	Effective Date	Expiration Date
02330T25	02330T24	XXXX, 2020	January 31, 2021

Until such time as this permit expires or is modified or revoked, the below named Permittee is permitted to construct and operate the emission source(s) and associated air pollution control device(s) specified herein, in accordance with the terms, conditions, and limitations within this permit. This permit is issued under the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended, and Title 15A North Carolina Administrative Codes (15A NCAC), Subchapters 02D and 02Q, and other applicable Laws.

Pursuant to Title 15A NCAC, Subchapter 02Q, the Permittee shall not construct, operate, or modify any emission source(s) or air pollution control device(s) without having first submitted a complete Air Quality Permit Application to the permitting authority and received an Air Quality Permit, except as provided in this permit.

Permittee:	**Troy Lumber Company Inc.**
Facility ID:	**6200029**
Facility Site Location:	**110 Leslie Street**
City, County, State, Zip:	**Troy, Montgomery County, North Carolina 27371**
Mailing Address:	**110 Leslie Street**
City, State, Zip:	**Troy, North Carolina 27371**
Application Number:	**6200029.19A and 6200029.17A**
Complete Application Date:	**August 13, 2020 and May 10, 2019**
Primary SIC Code:	**2421**
Division of Air Quality, Regional Office Address:	**Fayetteville Regional Office 225 Green Street, Suite 714 Fayetteville, North Carolina 28301-5094**

Permit issued this the XXth of XXXX, 2020

William D. Willets, P.E. Chief, Air Permitting Section
By Authority of the Environmental Management Commission

Table of Contents

SECTION 1 - PERMITTED EMISSION SOURCE(S) AND ASSOCIATED AIR POLLUTION CONTROL DEVICE(S) AND APPURTENANCES

*****Verify/revise page numbers prior to issuance**

The following table contains a summary of all permitted emission sources and associated air pollution control devices and appurtenances:

Page No(s).	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
4 – 13, 55 – 63	ES-B1 **(MACT DDDDD)**	One wood-fired underfired stoker boiler with a pre-heater (44.5 million Btu per hour maximum heat input) with flyash reinjection	CD-B-MC1 CD-B-MC2 CD-ESP-1	Two multicyclones (25 eight-inch tubes and 64 six-inch tubes, respectively) Electrostatic precipitator
13 – 22, 55 – 63	ES-Boiler2 **(MACT DDDDD; NSPS Dc)**	One wood-fired underfired stoker boiler (28.69 million Btu per hour maximum heat input) with flyash reinjection	CD-Boiler2-1 CD-Boiler2-2 CD-ESP-2	Two multicyclones (18 nine-inch tubes, each) Electrostatic precipitator
43 – 53, 55 – 62	ES-Boiler3 **(MACT DDDDD, NSPS Dc)**	One wood-fired stoker boiler (57 million Btu per hour maximum heat input) with flyash reinjection	CD-Boiler3-1 CD-Boiler3-2 CD-ESP-3	Two multicyclones (18 nine-inch tubes, each) Electrostatic precipitator
29 – 42, 55 – 63	ES-Boiler4[1] **(MACT DDDDD, NSPS Dc)**	***Primary Operating Scenario*** One limited-use ultra-low sulfur distillate fuel oil-fired boiler (32.66 million Btu per hour maximum heat input) ***Alternative Operating Scenario*** One ultra-low sulfur distillate fuel oil-fired boiler (32.66 million Btu per hour maximum heat input)	NA	NA
25 – 29, 55 – 62	ES-KILN-1 through ES-KILN-3[2] **(MACT DDDD, BACT)**	Three steam-heated indirect-fired continuous lumber drying kilns (13 thousand board-feet per hour maximum potential lumber charge capacity)	NA	NA
23 – 25, 55 – 62	ES-WCS	One sawmill wood (sawdust) collection system discharging into the wood fuel silo (8.1 ton per hour maximum boiler fuel feed rate)	CD-C2	One simple cyclone (41 inches in diameter)

[1] Troy Lumber accepted a compliance option per 40 CFR 63.7515(h) and 40 CFR 63.7575 to ONLY combust ultra-low sulfur fuel (i.e. restricting the fuel sulfur content to 15 ppm; 0.0015 percent by weight), which reduced Troy's PTE for all criteria pollutants below PSD Significance levels (i.e., Troy avoided triggering PSD for sulfur dioxide emissions). [Application No. 6200029.18B; issued Permit No. 02330T23]

[2] The facility requested an annual combined lumber throughput of 265.41 million board-feet (BF) per year for all kilns. Refer to Section 2.2 A.2. [Application No. 6200029.19A; effective upon issuance of Permit No. 02330T25]

Page No(s).	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
23 – 25, 55 – 62	ES-WCS-2	One sawmill wood (sawdust) collection system for Boiler 3 wood fuel silo (6.3 ton per hour maximum boiler fuel feed rate)	CD-C5	One simple cyclone (156 inches in diameter)
23 – 25, 55 – 62	ES-PM	One planer mill wood waste collection system	CD-C3	One simple cyclone (156 inches in diameter)
23 – 25, 55 – 62	ES-SH	One trim saw and wood hog wood waste collection system	CD-C4	One simple cyclone (108 inches in diameter)

SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

2.1 Emission Source(s) and Control Devices(s) Specific Limitations and Conditions

The emission source(s) and associated air pollution control device(s) and appurtenances listed below are subject to the following specific terms, conditions, and limitations, including the testing, monitoring, recordkeeping, and reporting requirements as specified herein:

A. One wood-fired underfired stoker boiler with pre-heater and flyash reinjection (ID No. ES-B1) with associated multicyclones (ID Nos. CD-B-MC1 and CD-B-MC2), installed in series and one electrostatic precipitator (ID No. CD-ESP-1)

The following provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter (including PM_{10})	0.50 pounds per million Btu heat input	15A NCAC 02D .0504
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible emissions	20 percent opacity	15A NCAC 02D .0521
Hazardous air pollutants	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters Compliance beginning May 20, 2019 **See Section 2.1 A.4**	15A NCAC 02D .1111 (40 CFR Part 63, Subpart DDDDD)
Odors	State-enforceable only **See Section 2.2 A.1**	15A NCAC 02D .1806
Particulate Matter Nitrogen Oxides CO_2 equivalent	**See Section 2.2 A.2**	15A NCAC 02Q .0317 (PSD Avoidance for 15A NCAC 02D .0530)

1. 15A NCAC 02D .0504: PARTICULATES FROM WOOD BURNING INDIRECT HEAT EXCHANGERS

a. Emissions of particulate matter from the combustion of wood that are discharged from this source **(ID No. ES-B1)** into the atmosphere shall not exceed 0.50 pounds per million Btu heat input.

Testing [15A NCAC 02Q .0508(f)]

b. To demonstrate compliance with the standards provided above, the Permittee shall conduct a compliance test for particulate matter (including PM_{10}) in accordance with General Condition JJ. The test shall be completed on or before November 16, 2019, and again for each subsequent 5-year period. If the compliance test shows that the emission rate is more than 80 percent of the allowable limit, the stack test frequency shall be increased to once every year. If the results of this or any test are above the limit given in Section 2.1 A.1.a above or if the testing is not conducted as described above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0504 and the Permittee shall resume performance testing on an annual basis, beginning no more than 13 months after the previous performance test.
[Testing was completed on July 24, 2019.]

Monitoring [15A NCAC 02Q .0508(f)]

c. Particulate matter emissions from this source **(ID No. ES-B1)** shall be controlled by two multicyclones **(ID Nos. CD-B-MC1 and CD-B-MC2),** installed in series and an electrostatic precipitator **(ID No. CD-ESP-1)**. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement must include the following:
   i. a monthly external visual inspection of the system ductwork, multicyclone material collection units, and electrostatic precipitator housing unit and hopper for leaks;
   ii. an annual (for each 12-month period following initial inspection) internal inspection of the multicyclones' structural integrity;
   iii. daily ESP inspections to verify the proper functioning of electronic controls for corona power and rapper operation, to verify that the corona wires are energized, and to verify that adequate air pressure is present on the rapper manifold; and
   iv. inspections of the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, plate rappers, hopper, and air diffuser plates every 24 months.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0504 if the multicyclones, ESP, and ductwork are not inspected and maintained.

Recordkeeping [15A NCAC 02Q .0508(f)]

d. The results of inspections and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each inspection;
   iii. a report of any maintenance performed on any control device; and
   iv. any variance from manufacturer's recommendations, if any, and any corrections made.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0504 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

e. Within 30 days of a written request from the DAQ, the Permittee shall submit a report of any maintenance performed on any control device.
f. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Section 2.1 A.1.c and d, above, postmarked on or before January 30 of each calendar year for

the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

a. Emissions of sulfur dioxide from this source **(ID No. ES-B1)** shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of wood in this source **(ID No. ES-B1)**.

3. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from this source **(ID No. ES-B1)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring [15A NCAC 02Q .0508(f)]

c. To ensure compliance, once a day the Permittee shall observe the emission points of this boiler **(ID No. ES-B1)** for any visible emissions above normal. The daily observation must be made for each day of the calendar year period to ensure compliance with this requirement. The Permittee shall be allowed three (3) days of absent observations per semi-annual period. The Permittee shall establish normal for this source in the first 30 days of beginning operation after installation of an ESP **(ID No. CD-ESP-1)**. If visible emissions from this source are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 A.3.a above.

   The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the required daily observations are not conducted as required; if the above-normal emissions are not corrected within the monitoring period or the percent opacity demonstration cannot be made; or if "normal" is not established for this source in the first 30 days following the effective date of permit 02330T23.

Recordkeeping [15A NCAC 02Q .0508(f)]

d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
   iii. the results of any corrective actions performed.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 A.3.c and d, above, postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

4. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

Applicability [40 CFR 63.7485, §63.7490(d), §63.7499(i), (p)]

a. For this source **(ID No. ES-B1)** (*i.e., existing Stokers/sloped grate/other units designed to burn wet biomass/bio-based solid with a heat input capacity 10 million Btu per hour or greater and controlled by multicyclone with dry ESP and oxygen trim system*), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDDD "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" (Subpart 5D), including Subpart A "General Provisions."

Definitions and Nomenclature [§63.7575]

b. For the purpose of this permit condition, the definitions and nomenclature contained in 40 CFR 63.7575 shall apply.

40 CFR Part 63 Subpart A General Provisions [§63.7565]

c. The Permittee shall comply with the requirements of 40 CFR 63 Subpart A General Provisions according to the applicability of Subpart A to such sources as identified in Table 10 to Subpart 5D.

Compliance Date [§63.7510(e), §63.56(b)]

d. The Permittee shall:
   i. complete the initial tune up and the one-time energy assessment as required in **Section 2.1 A.4. m. and p.** no later than May 20, 2019. [This requirement was met per NOCS received by FRO on September 23, 2019.]
   ii. complete the initial compliance requirements in **Section 2.1 A.4.j.** no later than November 16, 2019 and according to the applicable provisions in §63.7(a)(2). [This requirement was met on July 24, 2019.]

General Compliance Requirements [§63.7505(a), §63.7500]

e. At all times the affected unit(s) is operating, the Permittee shall be in compliance with the emission standards in **Section 2.1 A.4.g.**, except during periods of startup and shutdown. During startup and shutdown, the Permittee shall comply only with **Section 2.1 A.4.n. and o.** The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these requirements are not met.

f. At all times, then Permittee shall operate and maintain any affected source (as defined in §63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

Emission Limits [15A NCAC 02Q .0508(f), §63.7500(a)(1), Table 2]

g. The affected unit shall meet the following emission limits:

Pollutant	Emission Limit
Hydrochloric Acid (HCl)	2.2E-02 lb per MMBtu of heat input
Mercury (Hg)	5.7E-06 lb per MMBtu of heat input
Carbon monoxide (CO)	1,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3 run average
Filterable Particulate Matter (PM)	3.7E-02 lb per MMBtu of heat input

Testing [15A NCAC 02Q .0508(f)]

h. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test(s) are above the limit given in **Section 2.1 A.4.g.** above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.

Notifications [15A NCAC 02Q .0508(f)]

i. The Permittee shall submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin. [§63.7545(d)] The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if this notification requirement is not met.

Initial compliance requirements [15A NCAC 02Q .0508(f), §63.7510]

j. The Permittee shall demonstrate compliance with the limits in **Section 2.1 A.4.g.** by conducting initial performance test(s) and fuel analyses, establishing operating limits and conducting continuous monitoring system (CMS) evaluation(s) as necessary according to §§63.7510, 63.7525 and 63.7530. These requirements were met on July 24, 2019.

Subsequent compliance requirements [15A NCAC 02Q .0508(f), §63.7515]

k. The Permittee shall:
   i. conduct subsequent performance tests and fuel analyses as necessary according to §63.7515.
      (A) you must conduct all applicable performance tests according to §63.7520 on an annual basis, except as specified in §63.7515(b) through (e), (g), and (h). Annual performance tests shall be completed no more than 13 months after the previous performance test, except as specified in §63.7515(b) through (e), (g), and (h).

(B) if the performance tests for a given pollutant for at least 2 consecutive years show that the emissions are at or below 75 percent of the emission limit (or, in limited instances as specified in Tables 1 and 2 or 11 through 13 to this subpart, at or below the emission limit) for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, the Permittee may choose to conduct performance tests for the pollutant every third year. Each such performance test must be conducted no more than 37 months after the previous performance test.

(C) under the provisions of NCGS 143-215.108, if the compliance test shows that the emission rate is more than 75 percent of the allowable limit, the stack test frequency shall be increased to once every year. If the results of this or any test are above the limit given in Section 2.1 A.4.g above or if the testing is not conducted as described above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 and the Permittee shall resume performance testing on an annual basis, beginning no more than 13 months after the previous performance test.

ii.. demonstrate continuous compliance with each emission limit and operating limit that applies according to §63.7540.

iii. be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in **Section 2.1 A.4.k.** are not met.

Monitoring Requirements and Operating Limits [15A NCAC 02Q .0508(f), §63.7525, §63.7500, Table 4 to Subpart 5D]

l. The Permittee shall:

i. install, operate, and maintain an oxygen trim system, as defined in §63.7575, with the oxygen level set no lower than the lowest hourly average oxygen concentration measured during the most recent CO performance test. [§63.7525(a)(7)]. The oxygen level shall be no lower than **4.43[3] percent.**

ii install, operate, certify and maintain a COMS (CMS) according to the procedures in§63.7525(c)(1) through(7) and maintain opacity to less than or equal to 10 percent opacity or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM emission limitation (daily block average). The daily opacity block average value shall not exceed **10 percent.**

iii. install, operate and maintain a CMS for operating load and maintain the 30-day rolling average operating load of each unit such that it does not exceed 110 percent of the highest hourly average operating load recorded during the most recent performance test. [Table 7 to MACT 5D]. The 30-day rolling average operating load shall not exceed **22,031 lb/hr steam[4].**

iv. meet the requirements for all monitoring systems (CMS) as applicable according to §63.7525(d).

v. develop a site-specific monitoring plan according to the requirements in §63.7505(d)(1) through (4) for the use of any CMS. [§63.7505(d)].

vi. meet the operating limits as follows: Operation above the maximum or below the minimum operating limits shall constitute a deviation of the established operating limits above except during performance tests conducted to determine compliance with the emission limits or to establish new operating limits. Operating limits must be confirmed or reestablished during performance tests. [§63.7540(a)(1)]

[3] NOCS report (Table 2-3); submitted to FRO on September 23, 2019.
[4] Ibid 3

vii. be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in **Section 2.1 A.4.l.** are not met.

Work Practice Standards [15A NCAC 02Q .0508(f)]

Five Year Tune-up

m. i. The Permittee shall conduct a tune-up of the source every five years while burning the type of fuel that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up as specified below:
(A) as applicable, inspect the burner, and clean or replace any components of the burner as necessary, The Permittee may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled or unscheduled unit shutdown, but the burner must be inspected at least once every 72 months;
(B) inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
(C) inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown);
(D) optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject; and
(E) measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.

[§§63.7500(a), §63.7540(a)(10), (12)]

ii. Each tune-up shall be conducted no more than 61 months after the previous tune-up. [40CFR 63.7515(d)] This tune-up requirement was met on July 24, 2019.

iii. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup. [§63.7540(a)(13), §63.7515(g)]

iv. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in **Section 2.1 A.4.m.** are not met.

Startup Requirements [Table 3 to Subpart 5D]

n. During startup, the Permitee shall:
i. operate all CMS during startup.
ii. for startup of a boiler or process heater, must use one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, fuel oil-soaked rags, kerosene, hydrogen, paper, cardboard, refinery gas, liquefied petroleum gas, clean dry biomass, and any fuels meeting the appropriate HCl, mercury and TSM emission standards by fuel analysis.
iii. have the option of complying using either of the following work practice standards.
(A) if you choose to comply using definition (1) of "startup" in §63.7575, once you start firing fuels that are not clean fuels, you must vent emissions to the main stack(s) and engage all of the applicable control devices except limestone injection in fluidized bed combustion (FBC) boilers, dry scrubber, fabric filter, and selective catalytic reduction (SCR). You must start your limestone injection in FBC boilers, dry scrubber, fabric

filter, and SCR systems as expeditiously as possible. Startup ends when steam or heat is supplied for any purpose, OR

(B) if you choose to comply using definition (2) of "startup" in §63.7575, once you start to feed fuels that are not clean fuels, you must vent emissions to the main stack(s) and engage all of the applicable control devices so as to comply with the emission limits within 4 hours of start of supplying useful thermal energy. You must engage and operate PM control within one hour of first feeding fuels that are not clean fuels. You must start all applicable control devices as expeditiously as possible, but, in any case, when necessary to comply with other standards applicable to the source by a permit limit or a rule other than this subpart that require operation of the control devices. You must develop and implement a written startup and shutdown plan, as specified in §63.7505(e).

iv. comply with all applicable emission limits at all times except during startup and shutdown periods at which time you must meet this work practice. You must collect monitoring data during periods of startup, as specified in §63.7535(b). You must keep records during periods of startup. You must provide reports concerning activities and periods of startup, as specified in §63.7555.

Shutdown Requirements [Table 3 to Subpart 5D]

o. During shutdown, the Permittee shall:
   i. operate all CMS during shutdown.
   ii. while firing fuels that are not clean fuels during shutdown, you must vent emissions to the main stack(s) and operate all applicable control devices, except limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR but, in any case, when necessary to comply with other standards applicable to the source that require operation of the control device.
   iii. if, in addition to the fuel used prior to initiation of shutdown, another fuel must be used to support the shutdown process, that additional fuel must be one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, refinery gas, and liquefied petroleum gas.
   iv. shall comply with all applicable emissions limits at all times except for startup or shutdown periods conforming with this work practice. You must collect monitoring data during periods of shutdown, as specified in §63.7535(b). You must keep records during periods of shutdown. You must provide reports concerning activities and periods of shutdown, as specified in §63.7555.

Energy Assessment Requirements [15A NCAC 02Q .0508(f)]

p. The Permittee shall have a one-time energy assessment performed by a qualified energy assessor. The energy assessment must address the requirements in 40 CFR 63 Subpart 5D, Table 3, Item 4, with the extent of the evaluation for items (a) to (e) in Table 3, Item 4 appropriate for the on-site technical hours listed in §63.7575: [§63.7500(a)(1), Table 3] The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these requirements are not met. [The one-time energy assessment requirement was met on July 24, 2019.]

Recordkeeping Requirements [15A NCAC 02Q .0508(f), §63.7555]

q. The Permittee shall:
   i. keep a copy of each notification and report submitted to comply with Subpart 5D, including all documentation supporting any Initial Notification or Notification of Compliance Status, or semiannual compliance report that has been submitted. [§§63.7555(a)(1), 63.10(b)(2)(xiv)]

ii. keep records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations. [§63.10(b)(2)(viii)]

iii. maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (A) through (C) below:
(A) the concentrations of carbon monoxide in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;
(B) a description of any corrective actions taken as a part of the tune-up; and
(C) the type and amount of fuel used over the 12 months prior to the annual adjustment, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.
[§63.7540(a)(10)(vi)]

iv. for each CMS, keep records according to paragraphs (b)(1) through (5) of §63.7555.

v. keep records required in Table 8 of Subpart 5D including records of all monitoring data and calculated averages for applicable operating limits, such as opacity and operating load, to show continuous compliance with each emission limit and operating limit that applies.

vi. keep the applicable records in paragraphs (d)(1) through (13) of §63.7555.

vii. (A) maintain records in a form suitable and readily available for expeditious review;
(B) keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record; and
(C) keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records offsite for the remaining 3 years.
[§63.7560, §63.10(b)(1)]

viii. be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in **Section 2.1 A.4.q.** are not met.

Reporting Requirements [15A NCAC 02Q .0508(f), §63.7550]

r. i. The Permittee shall, consistent with 40 CFR 60.7(c), submit semiannually an excess emissions and continuous monitoring system performance report and/or a summary report. The semiannual report shall be calculated on a quarterly basis and contain the monitoring and recordkeeping activities given in Section 2.1 A.4. l through q above. The semiannual report shall be postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.
(A) the first compliance report shall be postmarked on or before July 30, 2019 and cover the period from May 20, 2019 through June 30, 2019.
(B) the compliance reports shall also be submitted electronically to the EPA via the procedures in §63.7550(h).

ii. The compliance report shall contain:
(A) the information in §63.7550(c) as applicable.
(B) for each deviation from an emission limit or operating limit, the report shall contain the information in§63.7550(d) and §63.7550(e) as applicable.
(C) for COMS, an excess emissions and continuous monitoring system performance report and/or summary report according to §63.10(e)(3)(vii) or (viii). The reports shall contain the information specified in §63.10(e)(3)(v) and (vi).

iii. Within 60 days after the date of completing each performance test (defined in §63.2) including any associated fuel analyses and/or CEMS performance evaluation (defined in

§63.2) as required by Subpart 5D, the Permittee shall submit the results to the DAQ and also directly to the EPA electronically via the procedures in §63.7550(h).

(A) this report must also verify that the operating limits in **Section 2.1 A.4.l.** have not changed or provide documentation of revised operating limits established according to §63.7530 and Table 7 to Subpart 5D, as applicable. The reports for all subsequent performance tests must include all applicable information required in §63.7550. [§63.7515(f)]

(B) if performance testing indicates compliance with emission limits is demonstrated with revisions to operating limits that are more stringent than the established minimum or maximum operating limits in **Section 2.1 A.4.l.** the Permittee shall submit a request to revise the values in the permit at the same time as the test report is submitted. The permit revision will be processed pursuant to 15A NCAC 02Q .0514.

(C) if performance testing indicates that compliance with emission limits is demonstrated with revisions to operating limits that are less stringent than the established minimum or maximum operating limits, in **Section 2.1 A.4.l.** the Permittee may request to revise the values in the permit pursuant to 15A NCAC 02Q .0515.

iv. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in **Section 2.1 A.4.r.** are not met.

B. One wood-fired underfire stoker boiler with flyash reinjection (ID No. ES-Boiler2) with associated multicyclones (ID Nos. CD-Boiler2-1 and CD-Boiler2-2), installed in series and one electrostatic precipitator (ID No. CD-ESP-2)

The following provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter (including PM_{10})	0.449 pounds per million Btu heat input	15A NCAC 02D .0504
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible emissions	20 percent opacity	15A NCAC 02D .0521
-	Initial notification of start-up [60.48c(a)] – *Permittee completed notification **November 20, 2006*** Records of amount of wood combusted during each day [60.48c(g)]	15A NCAC 02D .0524 (40 CFR 60, Subpart Dc)
Hazardous air pollutants	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters Compliance beginning May 20, 2019 **See Section 2.1 B.5**	15A NCAC 02D .1111 (40 CFR Part 63, Subpart DDDDD)
Odors	**State-enforceable only** **See Section 2.2 A.1**	15A NCAC 02D .1806
Particulate Matter Nitrogen Oxides CO_2 equivalent	**See Section 2.2 A.2**	15A NCAC 02Q .0317 (PSD Avoidance for 15A NCAC 02D .0530)

1. 15A NCAC 02D .0504: PARTICULATES FROM WOOD BURNING INDIRECT HEAT EXCHANGERS

a. Emissions of particulate matter from the combustion of wood that are discharged from this source **(ID No. ES-Boiler2)** into the atmosphere shall not exceed 0.449 pounds per million Btu heat input.

Testing [15A NCAC 02Q .0508(f)]

b. To demonstrate compliance with the standards provided above, the Permittee shall conduct a compliance test for particulate matter (including PM_{10}) in accordance with General Condition JJ. The test shall be completed on or before November 16, 2019, and again for each subsequent 5-year period. If the compliance test shows that the emission rate is more than 80 percent of the allowable limit, the stack test frequency shall be increased to once every year. If the results of this or any test are above the limit given in Section 2.1 B.1.a above or if the testing is not conducted as described above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0504 and the Permittee shall resume performance testing on an annual basis, beginning no more than 13 months after the previous performance test.
[Testing was completed on July 23, 2019.].

Monitoring [15A NCAC 02Q .0508(f)]

c. Particulate matter emissions from this source **(ID No. ES-Boiler2)** shall be controlled by two multicyclones **(ID Nos. CD-Boiler2-1 and CD-Boiler2-2)** installed in series and an electrostatic precipitator **(ID No. CD-ESP-2)**. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement must include the following:
   i. a monthly external visual inspection of the system ductwork, multicyclone material collection units, and electrostatic precipitator housing unit and hopper for leaks;
   ii. an annual (for each 12-month period following initial inspection) internal inspection of the multicyclones' structural integrity;
   iii. daily ESP inspections to verify the proper functioning of electronic controls for corona power and rapper operation, to verify that the corona wires are energized, and to verify that adequate air pressure is present on the rapper manifold; and
   iv. inspections of the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, plate rappers, hopper, and air diffuser plates every 24 months.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0504 if the multicyclones, ESP, and ductwork are not inspected and maintained.

Recordkeeping [15A NCAC 02Q .0508(f)]

d. The results of inspections and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each inspection;
   iii. a report of any maintenance performed on any control device; and
   iv. any variance from manufacturer's recommendations, if any, and any corrections made.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0504 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

e. Within 30 days of a written request from the DAQ, the Permittee shall submit a report of any maintenance performed on any control device.

f. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Section 2.1 B.1.c and B.1.d, above, postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

a. Emissions of sulfur dioxide from this source **(ID No. ES-Boiler2)** shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 B.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of wood in this source **(ID No. ES-Boiler2)**.

3. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from this source **(ID No. ES-Boiler2)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 B.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring [15A NCAC 02Q .0508(f)]

c. To ensure compliance, once a day the Permittee shall observe the emission points of this boiler **(ID No. ES-Boiler2)** for any visible emissions above normal. The daily observation must be made for each day of the calendar year period to ensure compliance with this requirement. The Permittee shall be allowed three (3) days of absent observations per semi-annual period. The Permittee shall establish normal for this source in the first 30 days of beginning operation after installation of an ESP **(ID No. CD-ESP-2)**. If visible emissions from this source are observed to be above normal, the Permittee shall either:

   i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or

   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 B.3.a above.

The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the required daily observations are not conducted as required; if the above-normal emissions are not corrected within the monitoring period or the percent opacity demonstration cannot be made; or if "normal" is not established for this source in the first 30 days following the effective date of permit 02330T23.

Recordkeeping [15A NCAC 02Q .0508(f)]

d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
   iii. the results of any corrective actions performed.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 B.3.c and d, above, postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

4. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS for 40 CFR Part 60, Subpart Dc

a. The Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards" (NSPS) as promulgated in 40 CFR Part 60 Subpart Dc "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units," including Subpart A "General Provisions."

b. **NSPS Requirements –** In addition to any other reporting required by 40 CFR 60.48c or notification requirements to the EPA, the Permittee is required to notify the DAQ in writing of the following:
   i. the date construction (40 CFR 60.7) or reconstruction (40 CFR 60.15) of an affected facility is commenced, postmarked no later than 30 days after such date.
   ii. upon start-up, the Permittee shall record the amount of fuel combusted during each day (40 CFR 60.48(c)(g)).

5. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY
Applicability [40 CFR 63.7485, §63.7490(d), §63.7499(i), (p)]

a. For this source **(ID No. ES-Boiler2)** (*i.e., existing Stokers/sloped grate/other units designed to burn wet biomass/bio-based solid with a heat input capacity 10 million Btu per hour or greater and controlled by multicyclone with dry ESP and oxygen trim system*), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111

"Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDDD "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" (Subpart 5D), including Subpart A "General Provisions."

Definitions and Nomenclature [§63.7575]

b. For the purpose of this permit condition, the definitions and nomenclature contained in 40 CFR 63.7575 shall apply.

40 CFR Part 63 Subpart A General Provisions [§63.7565]

c. The Permittee shall comply with the requirements of 40 CFR 63 Subpart A General Provisions according to the applicability of Subpart A to such sources as identified in Table 10 to Subpart 5D.

Compliance Date [§63.7510(e), §63.56(b)]

d. The Permittee shall:
   i. Complete the initial tune up and the one-time energy assessment as required in **Section 2.1 B.5.m. and p.** no later than May 20, 2019. [This requirement was met per NOCS received by FRO on September 23, 2019.]
   ii. Complete the initial compliance requirements in **Section 2.1 B.5.j.** no later than November 16, 2019 and according to the applicable provisions in §63.7(a)(2). [This requirement was met on July 23, 2019.]

General Compliance Requirements [§63.7505(a), §63.7500]

e. At all times the affected unit(s) is operating, the Permittee shall be in compliance with the emission standards in **Section 2.1 B.5.g.**, except during periods of startup and shutdown. During startup and shutdown, the Permittee shall comply only with **Section 2.1 B.5.n. and o.** The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these requirements are not met.

f. At all times, then Permittee shall operate and maintain any affected source (as defined in §63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

Emission Limits [15A NCAC 02Q .0508(f), §63.7500(a)(1), Table 2]

g. The affected unit shall meet the following emission limits:

Pollutant	Emission Limit
Hydrochloric Acid (HCl)	2.2E-02 lb per MMBtu of heat input
Mercury (Hg)	5.7E-06 lb per MMBtu of heat input
Carbon monoxide (CO)	1,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3 run average
Filterable Particulate Matter (PM)	3.7E-02 lb per MMBtu of heat input

Testing [15A NCAC 02Q .0508(f)]

h. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test(s) are above the limit given in **Section 2.1 B.5.g.** above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.

Notifications [15A NCAC 02Q .0508(f)]

i. The Permittee shall submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin. [§63.7545(d)] The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if this notification requirement is not met.

Initial compliance requirements [15A NCAC 02Q .0508(f), §63.7510]

j. The Permittee shall demonstrate compliance with the limits in **Section 2.1 B.5.g.** by conducting initial performance test(s) and fuel analyses, establishing operating limits and conducting continuous monitoring system (CMS) evaluation(s) as necessary according to §§63.7510, 63.7525 and 63.7530. These requirements were met on July 23, 2019.

Subsequent compliance requirements [15A NCAC 02Q .0508(f), §63.7515]

k. The Permittee shall:
   i. conduct subsequent performance tests and fuel analyses as necessary according to §63.7515.
      (A) you must conduct all applicable performance tests according to §63.7520 on an annual basis, except as specified in §63.7515(b) through I, (g), and (h). Annual performance tests shall be completed no more than 13 months after the previous performance test, except as specified in §63.7515(b) through (e), (g), and (h).
      (B) if the performance tests for a given pollutant for at least 2 consecutive years show that the emissions are at or below 75 percent of the emission limit (or, in limited instances as specified in Tables 1 and 2 or 11 through 13 to this subpart, at or below the emission limit) for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, the Permittee may choose to conduct performance tests for the pollutant every third year. Each such performance test must be conducted no more than 37 months after the previous performance test.
      (C) under the provisions of NCGS 143-215.108, if the compliance test shows that the emission rate is more than 75 percent of the allowable limit, the stack test frequency shall be increased to once every year. If the results of this or any test are above the limit given in Section 2.1 B.5.g above or if the testing is not conducted as described above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 and the Permittee shall resume performance testing on an annual basis, beginning no more than 13 months after the previous performance test.
   ii.. demonstrate continuous compliance with each emission limit and operating limit that applies according to §63.7540.
   iii. be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in **Section 2.1 B.5.k.** are not met.

Monitoring Requirements and Operating Limits [15A NCAC 02Q .0508(f), §63.7525, §63.7500, Table 4 to Subpart 5D]

l. The Permittee shall:
   i. install, operate, and maintain an oxygen trim system, as defined in §63.7575, with the oxygen level set no lower than the lowest hourly average oxygen concentration measured

during the most recent CO performance test. [§63.7525(a)(7)]. The oxygen level shall be no lower than **5.36[5] percent.**

ii install, operate, certify and maintain a COMS (CMS) according to the procedures in§63.7525(c)(1) through(7) and maintain opacity to less than or equal to 10 percent opacity or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM emission limitation (daily block average). The daily opacity block average value shall not exceed **10 percent.**

iii. install, operate and maintain a CMS for operating load and maintain the 30-day rolling average operating load of each unit such that it does not exceed 110 percent of the highest hourly average operating load recorded during the most recent performance test. [Table 7 to MACT 5D]. The 30-day rolling average operating load shall not exceed **25,369 lb/hr steam[6].**

iv. meet the requirements for all monitoring systems (CMS) as applicable according to §63.7525(d).

v. develop a site-specific monitoring plan according to the requirements in §63.7505(d)(1) through (4) for the use of any CMS. [§63.7505(d)].

vi. meet the operating limits as follows: Operation above the maximum or below the minimum operating limits shall constitute a deviation of the established operating limits above except during performance tests conducted to determine compliance with the emission limits or to establish new operating limits. Operating limits must be confirmed or reestablished during performance tests. [§63.7540(a)(1)]

vii. be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in **Section 2.1 B.5.l.** are not met.

Work Practice Standards [15A NCAC 02Q .0508(f)]

Five Year Tune-up

m. i. The Permittee shall conduct a tune-up of the source(s) every five years while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up as specified below:

(A) As applicable, inspect the burner, and clean or replace any components of the burner as necessary, The Permittee may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled or unscheduled unit shutdown, but the burner must be inspected at least once every 72 months;

(B) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

(C) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown);

(D) Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject; and

(E) Measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis

[5] NOCS report (Table 2-3); submitted to FRO on September 23, 2019.
[6] Ibid 5

before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.

[§§63.7500(a), §63.7540(a)(10), (12)]

ii. Each tune-up shall be conducted no more than 61 months after the previous tune-up. [40CFR 63.7515(d)] [This tune-up requirement was met on July 23, 2019.]

iii. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup. [§63.7540(a)(13), §63.7515(g)]

iv. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in **Section 2.1 B.5.m.** are not met.

Startup Requirements [Table 3 to Subpart 5D]

n. During startup, the Permittee shall:

i. operate all CMS during startup.

ii. for startup of a boiler or process heater, must use one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, fuel oil-soaked rags, kerosene, hydrogen, paper, cardboard, refinery gas, liquefied petroleum gas, clean dry biomass, and any fuels meeting the appropriate HCl, mercury and TSM emission standards by fuel analysis.

iii. have the option of complying using either of the following work practice standards.

(A) if you choose to comply using definition (1) of "startup" in §63.7575, once you start firing fuels that are not clean fuels, you must vent emissions to the main stack(s) and engage all of the applicable control devices except limestone injection in fluidized bed combustion (FBC) boilers, dry scrubber, fabric filter, and selective catalytic reduction (SCR). You must start your limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR systems as expeditiously as possible. Startup ends when steam or heat is supplied for any purpose, OR

(B) if you choose to comply using definition (2) of "startup" in §63.7575, once you start to feed fuels that are not clean fuels, you must vent emissions to the main stack(s) and engage all of the applicable control devices so as to comply with the emission limits within 4 hours of start of supplying useful thermal energy. You must engage and operate PM control within one hour of first feeding fuels that are not clean fuels. You must start all applicable control devices as expeditiously as possible, but, in any case, when necessary to comply with other standards applicable to the source by a permit limit or a rule other than this subpart that require operation of the control devices. You must develop and implement a written startup and shutdown plan, as specified in §63.7505(e).

iv. comply with all applicable emission limits at all times except during startup and shutdown periods at which time you must meet this work practice. You must collect monitoring data during periods of startup, as specified in §63.7535(b). You must keep records during periods of startup. You must provide reports concerning activities and periods of startup, as specified in §63.7555.

Shutdown Requirements [Table 3 to Subpart 5D]

o. During shutdown, the Permittee shall:

i. operate all CMS during shutdown.

ii. while firing fuels that are not clean fuels during shutdown, you must vent emissions to the main stack(s) and operate all applicable control devices, except limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR but, in any case, when necessary to comply with other standards applicable to the source that require operation of the control device.

iii. if, in addition to the fuel used prior to initiation of shutdown, another fuel must be used to support the shutdown process, that additional fuel must be one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, refinery gas, and liquefied petroleum gas.

iv. shall comply with all applicable emissions limits at all times except for startup or shutdown periods conforming with this work practice. You must collect monitoring data during periods of shutdown, as specified in §63.7535(b). You must keep records during periods of shutdown. You must provide reports concerning activities and periods of shutdown, as specified in §63.7555.

Energy Assessment Requirements [15A NCAC 02Q .0508(f)]

p. The Permittee shall have a one-time energy assessment performed by a qualified energy assessor. The energy assessment must address the requirements in 40 CFR 63 Subpart 5D, Table 3, Item 4, with the extent of the evaluation for items (a) to (e) in Table 3, Item 4 appropriate for the on-site technical hours listed in §63.7575: [§63.7500(a)(1), Table 3] The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these requirements are not met. [The one-time energy assessment requirement was met on July 23, 2019.]

<u>Recordkeeping Requirements</u> [15A NCAC 02Q .0508(f), §63.7555]

q. The Permittee shall:

i. keep a copy of each notification and report submitted to comply with Subpart 5D, including all documentation supporting any Initial Notification or Notification of Compliance Status, or semiannual compliance report that has been submitted. [§§63.7555(a)(1), 63.10(b)(2)(xiv)]

ii. keep records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations. [§63.10(b)(2)(viii)]

iii. maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (A) through (C) below:
(A) the concentrations of carbon monoxide in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;
(B) a description of any corrective actions taken as a part of the tune-up; and
(C) the type and amount of fuel used over the 12 months prior to the annual adjustment, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.
[§63.7540(a)(10)(vi)]

iv. for each CMS, keep records according to paragraphs (b)(1) through (5) of §63.7555.

v. keep records required in Table 8 of Subpart 5D including records of all monitoring data and calculated averages for applicable operating limits, such as opacity and operating load, to show continuous compliance with each emission limit and operating limit that applies.

vi. keep the applicable records in paragraphs (d)(1) through (13) of §63.7555.

vii. (A) maintain records in a form suitable and readily available for expeditious review;
(B) keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record; and
(C) keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records offsite for the remaining 3 years.
[§63.7560, §63.10(b)(1)]

viii. be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in **Section 2.1 B.5.q.** are not met.

Reporting Requirements [15A NCAC 02Q .0508(f), §63.7550]

r. i. The Permittee shall, consistent with 40 CFR 60.7(c), submit semiannually an excess emissions and continuous monitoring system performance report and/or a summary report. The semiannual report shall be calculated on a quarterly basis and contain the monitoring and recordkeeping activities given in Section 2.1 B.5. l through q above. The semiannual report shall be postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.
(A) the first compliance report shall be postmarked on or before July 30, 2019 and cover the period from May 20, 2019 through June 30, 2019.
(B) the compliance reports shall also be submitted electronically to the EPA via the procedures in §63.7550(h).

ii. The compliance report shall contain:
(A) the information in §63.7550(c) as applicable.
(B) for each deviation from an emission limit or operating limit, the report shall contain the information in§63.7550(d) and (e) as applicable.
(C) for COMS, an excess emissions and continuous monitoring system performance report and/or summary report according to §63.10(e)(3)(vii) or (viii). The reports shall contain the information specified in §63.10(e)(3)(v) and (vi).

iii. Within 60 days after the date of completing each performance test (defined in §63.2) including any associated fuel analyses and/or CEMS performance evaluation (defined in §63.2) as required by Subpart 5D, the Permittee shall submit the results to the DAQ and also directly to the EPA electronically via the procedures in §63.7550(h).
(A) this report must also verify that the operating limits in **Section 2.1 B.5.l.** have not changed or provide documentation of revised operating limits established according to §63.7530 and Table 7 to Subpart 5D, as applicable. The reports for all subsequent performance tests must include all applicable information required in §63.7550. [§63.7515(f)]
(B) if performance testing indicates compliance with emission limits is demonstrated with revisions to operating limits that are more stringent than the established minimum or maximum operating limits in **Section 2.1 B.5.l.,** the Permittee shall submit a request to revise the values in the permit at the same time as the test report is submitted. The permit revision will be processed pursuant to 15A NCAC 02Q .0514.
(C) if performance testing indicates that compliance with emission limits is demonstrated with revisions to operating limits that are less stringent than the established minimum or maximum operating limits, the Permittee may request to revise the values in the permit pursuant to 15A NCAC 02Q .0515.

iv. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in **Section 2.1 B.5.r.** are not met.

C. Wood waste collection:

- **One sawmill wood (sawdust) collection system discharging into the wood fuel silo (ID No. ES-WCS) with associated cyclone (ID No. CD-C2)**
- **One planer mill wood waste collection system (ID No. ES-PM) with associated cyclone (ID No. CD-C3)**
- **One trim saw and wood hog waste collection system (ID No. ES-SH) with associated cyclone (ID No. CD-C4)**
- **One sawmill wood (sawdust) collection system for Boiler 3 - wood fuel silo (ID No. ES-WCS-2) with associated cyclone (ID No. CD-C5)**

The following provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter (including PM_{10})	Adequate ductwork and properly designed collectors	15A NCAC 02D .0512
Visible emissions	20 percent opacity	15A NCAC 02D .0521
Odors	State-enforceable only **See Section 2.2 A.1**	15A NCAC 02D .1806
Particulate Matter	**See Section 2.2 A.2**	15A NCAC 02Q .0317 (PSD Avoidance for 15A NCAC 02D .0530)

1. 15A NCAC 02D .0512: PARTICULATES FROM WOOD PRODUCTS FINISHING PLANTS

a. The Permittee shall not cause, allow, or permit particulate matter caused by the working, sanding, or finishing of wood to be discharged from any stack, vent, or building into the atmosphere without providing, as a minimum for its collection, adequate ductwork and properly designed collectors. In no case shall the ambient air quality standards be exceeded beyond the property line.

Monitoring [15A NCAC 02Q .0508(f)]

b. Particulate matter emissions from these sources **(ID Nos. ES-WCS, ES-PM, ES-SH and ES-WCS-2)** shall be controlled by cyclones **(ID Nos. CD-2 through CD-5),** respectively. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer, if any. As a minimum, the inspection and maintenance program shall include:

i. monthly external inspection of the ductwork and cyclones noting the structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0512 if the ductwork and cyclones are not inspected and maintained.

Recordkeeping [15A NCAC 02Q .0508(f)]

c. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:

i. the date and time of each recorded action;
ii. the results of each inspection; and
iii. the results of maintenance performed on any control device.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0512 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

d. The Permittee shall submit the results of any maintenance performed on any control device within 30 days of a written request by DAQ.
e. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Sections 2.1 C.1.b and c above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from these sources **(ID Nos. ES-WCS, ES-PM, ES-SH and ES-WCS-2)** shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 C.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring [15A NCAC 02Q .0508(f)]

c. To ensure compliance, once a week the Permittee shall observe the emission points of these sources **(ID Nos. ES-WCS, ES-PM, ES-SH and ES-WCS-2)** for any visible emissions above normal. The weekly observation must be made for each week of the calendar year period to ensure compliance with this requirement. The Permittee shall establish "normal" for this source **(ID No. ES-WCS-2)** in the first 30 days of beginning operation. If visible emissions from these sources are observed to be above normal, the Permittee shall either:
   i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
   ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in Section 2.1 C.2.a above.

   The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521 if the required weekly observations are not conducted as required; if the above-normal emissions are not corrected within the monitoring period or the percent opacity demonstration cannot be made; or if "normal" is not established for this source (ID No. ES-WCS-2) in the first 30 days of beginning operation.

Recordkeeping [15A NCAC 02Q .0508(f)]

d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;

ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
iii. the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

e. The Permittee shall submit a summary report of the monitoring and recordkeeping activities given in Sections 2.1 C.2 c and d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

D. Kilns:

- **Three steam-heated indirect-fired continuous lumber drying kilns (ID No. ES-KILN-1, ES-KILN-2 and ES-KILN-3)**

Emission Source ID No.(s)	Operating Scenario
Phase I: Defined as the time period between permit issuance date and the date of Kiln 2 restart	
ES-KILN-1 and ES-KILN-3	**Two steam-heated indirect-fired continuous lumber drying kilns**
ES-KILN-2	**One steam-heated batch lumber drying kiln**
Phase II: Defined as the time period between Kiln 2 restart and the date of Kiln 2 conversion from Batch to Continuous Operation	
ES-KILN-1, ES-KILN-2 and ES-KILN-3	**Three steam-heated indirect-fired continuous lumber drying kilns**

The following provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Volatile Organic Compounds	Approved DAQ emission factors (EF) in pounds per thousand board feet (lbs/MBF) – BACT was evaluated for 4.09 lbs/MBF (approved DAQ EF) for baseline and 4.78 lbs/MBF (NCASI approved EF) for projected **Production limits:** **Kilns** maximum annual board feet of lumber processed shall not exceed 265.41 million board feet per year (MMBF/yr) in all three kilns **(ID Nos. ES-KILN-1, ES-KILN-2 and ES-KILN-3)** per consecutive 12-month period **BACT** for continuous kilns **(ID Nos. ES-KILN-1, ES-KILN-2, and ES-KILN-3)**: Work practice standards (i.e., proper maintenance and operation; and proper temperature and process management)	15A NCAC 02D .0530

Regulated Pollutant	Limits/Standards	Applicable Regulation
Hazardous Air Pollutants	National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products MACT No applicable requirements other than initial notification for restart of Kiln 2 **(ID No. ES-KILN-2)**	15A NCAC 2D .1111 (40 CFR 63, Subpart DDDD)
Alternative Operating Scenarios	***Phase I - Operating Scenario – Kiln 2 batch lumber drying*** ***Phase II – Operating Scenario – Kiln 2 continuous lumber drying*** Record in a logbook (written or electronic format) the scenario under which Kiln 2 **(ID No. ES-KILN-2)** is operating.	15A NCAC 02Q .0508(j)
Odors	State-enforceable only **See Section 2.2 A.1**	15A NCAC 02D .1806
Particulate Matter	**See Section 2.2 A.2**	15A NCAC 02Q .0317 (PSD Avoidance for 15A NCAC 02D .0530)
Particulate matter	$E = 4.10 \times P^{0.67}$ Where: E = allowable emission rate in pounds per hour P = process weight in tons per hour	15A NCAC 02D .0515
Visible emissions	20 percent opacity	15A NCAC 02D .0521

1. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements in accordance with 15A NCAC 02D .0530, "Prevention of Significant Deterioration of Air Quality" as promulgated in 40 CFR 51.166.
   i. The following emission limits shall not be exceeded:

Emission Source	Pollutant	BACT Limit	Units	Technology
Continuous indirect-fired steam heated lumber kilns **(ID Nos. ES-KILN-1, ES-KILN-2, and ES-KILN-3)**	VOC (as pinene)	4.78	lb/MBF	Good design and operating practices
		634.33	tpy	

b. To ensure compliance with the emission limits given in Section 2.1 D.1.a above, the Permittee shall not exceed a maximum combined lumber throughput of 265.41 million board feet (MMBF) per year of lumber dried in the three indirect-fired steam heated continuous kilns **(ID Nos. ES-KILN-1, ES-KILN-2, and ES-KILN-3)** per consecutive 12-month period.

Testing [15A NCAC 02Q .0508(f)]

c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

d. The Permittee shall operate and maintain the three continuous dry kilns **(ID Nos. ES-KILN-1, ES-KILN-2, and ES-KILN-3)** in accordance with the manufacturer's specifications or a site-specific plan[7] approved by the NC DAQ Regional Administrator. The Permittee shall record any maintenance performed on the kilns each month in a logbook (written or electronic format).
e. To ensure compliance with the limits in Section 2.1 D.1.a above, the Permittee shall calculate the following:
   i. the monthly production rate and the 12-month production rate of the three indirect-fired continuous kilns **(ID Nos. ES-KILN-1, ES-KILN-2, and ES-KILN-3)**.
   ii. the monthly VOC emissions and the 12-month VOC emissions from the three indirect-fired continuous kilns **(ID Nos. ES-KILN-1, ES-KILN-2, and ES-KILN-3)**. VOC emissions shall be determined by multiplying the total amount of lumber dried in the kilns by an emission factor of 4.78 pounds of VOC emissions per thousand board feet (MBF) of lumber dried.
f. The Permittee shall record the production rates and VOC emissions specified in Sections 2.1 D.1.e.i. and e.ii. above each month in a logbook (written or electronic format).

Reporting [15A NCAC 02Q .0508(f)]

g. The Permittee shall submit a semiannual summary report of monitoring and recordkeeping activities given in Sections 2.1 D.1.d. through 2.1 D.1.f. above postmarked on or before January 30 of each calendar year for the preceding six-month period and on or before July 30 of each calendar year for the preceding six-month period. The report shall contain the following:
   i. The monthly volatile organic compound emissions from the three indirect-fired continuous kilns **(ID Nos. ES-KILN-1, ES-KILN-2, and ES-KILN-3)** the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months; and
   ii. The monthly quantities of lumber dried in each of the three indirect-fired continuous kilns **(ID Nos. ES-KILN-1, ES-KILN-2, and ES-KILN-3)** for the previous 17 months. The amount of lumber dried must be calculated for each of the 12-month periods over the previous 17 months.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the 12-month rolling production average exceeds 265.41 MMBF per year from the three indirect-fired continuous kilns **(ID Nos. ES-KILN-1, ES-KILN-2, and ES-KILN-3)** OR if the above requirements are not maintained.

2. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (40 CFR 63 Subpart DDDD)

Applicability [40 CFR § 63.2231]

a. For the emission sources subject to "**MACT Subpart DDDD**" as indicated above and in the permitted equipment list **(ID Nos. ES-KILN-1 through ES-KILN-3)**, the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting

[7] Troy Lumber Company (Application No. 6200029.19A) – Appendix H – Kiln Operating Procedures to Demonstrate BACT of revised application received April 1, 2020

contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDD National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products, including Subpart A "General Provisions."

Definitions and Nomenclature [40 CFR § 63.2292]

b. For the purpose of this permit condition, the definitions and nomenclature contained in 40 CFR § 63.2292 shall apply.

40 CFR Part 63 Subpart A General Provisions [40 CFR 63.2290]

c. The Permittee shall comply with the requirements of 40 CFR Part 63, Subpart A General Provisions according to the applicability of Subpart A to such sources, as identified in Table 10 to 40 CFR Part 63, Subpart DDDD.

Compliance Options and Operating Requirements [15A NCAC 02Q .0508(f)]

d. For the emission sources subject to "MACT Subpart DDDD" as indicated above and in the permitted equipment list the Permittee shall comply with compliance options and operating requirements described in paragraph 40 CFR § 63.2252 by submitting an initial compliance notification pursuant to 40 CFR § 63.9. [40 CFR § 63.2252]

Notification Requirements [15A NCAC 02Q .0508(f); 40 CFR § 63.2252]

e. The owner or operator shall notify the DAQ and the EPA in writing that the source **(ID No. ES-KILN-2)** is subject to the relevant standard. The notification, which shall be submitted not later than 120 calendar days after the source becomes subject to the relevant standard, shall provide the following information:
   i. The name and address of the owner or operator;
   ii. The address (i.e., physical location) of the affected source;
   iii. An identification of the relevant standard, or other requirement, that is the basis of the notification and the source's compliance date;
   iv. A brief description of the nature, size, design, and method of operation of the source and an identification of the types of emission points within the affected source subject to the relevant standard and types of hazardous air pollutants emitted; and
   v. A statement of whether the affected source is a major source or an area source.

   [Application No. 6200029.19A fulfilled this requirement in accordance with 40 CFR § 63.9(b)(iii)]

f. Within 15 days of startup of this source **(ID No. ES-KILN-2)**, the Permittee shall submit an initial notification of MACT applicability as an affected source as defined in 40 CFR § 63.2231(a). No other requirements are necessary for this source as part of the MACT pursuant to 40 CFR § 63.2252. [40 CFR § 63.9(b)]

3. 15A NCAC 02Q .0508(j): ALTERNATIVE OPERATING SCENARIOS [15A NCAC 02Q .0508(j)]

a. The Permittee, contemporaneously with making a change from one alternate operating scenario to another, shall record in a logbook (written or electronic format) the scenario under which it is operating.

4. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from these sources **(ID Nos. ES-KILN-1 through ES-KILN-3)**, shall not exceed an allowable emission rate as calculated by the following equation:

$E = 4.10 \times P^{0.67}$

Where: E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 D.4.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

c. The Permittee shall maintain production records such that the process rates "P" in tons per hour, as specified by the formulas contained above (or the formulas contained in 15A NCAC 2D .0515) can be derived, and shall make these records available to a DAQ authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the production records are not maintained.

d. No reporting is required for particulate emissions from these sources **(ID Nos. ES-KILN-1 through ES-KILN-3).**

5. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from these sources **(ID Nos. ES-KILN-1 through ES-KILN-3)** shall not exceed 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 D.5.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for visible emissions from these sources **(ID Nos. ES-KILN-1 through ES-KILN-3)**.

E. One ultra-low sulfur[8] distillate fuel oil-fired boiler (ID No. ES-Boiler4)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	0.325 pounds particulate per million Btu heat input	15A NCAC 02D .0503
Sulfur Dioxide	Fuel oil sulfur content shall not exceed 0.5 percent by weight.	15A NCAC 02D .0524 (40 CFR Part 60, Subpart Dc)
Visible Emissions	20 percent opacity	15A NCAC 02D .0524 (40 CFR Part 60, Subpart Dc)
Hazardous air pollutants	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters Primary Operating Scenario: Compliance beginning upon startup **See Section 2.1 E.3**	15A NCAC 02D .1111 (40 CFR Part 63, Subpart DDDDD)
Hazardous air pollutants	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters Alternative Operating Scenario: Compliance beginning upon startup **See Section 2.1 E.4**	15A NCAC 02D .1111 (40 CFR Part 63, Subpart DDDDD)
Alternative Operating Scenarios	***Primary Operating Scenario (POS) – Limited-use boiler*** ***Alternative Operating Scenario (AOS) – Greater than 10% annual capacity*** Record in a logbook (written or electronic format) the scenario under which Boiler 4 **(ID No. ES-Boiler4)** is operating.	15A NCAC 02Q .0508(j)
Odors	State-enforceable only **See Section 2.2 A.1**	15A NCAC 02D .1806
Particulate Matter Nitrogen Oxides CO_2 equivalent	**See Section 2.2 A.2**	15A NCAC 02Q .0317 (PSD Avoidance for 15A NCAC 02D .0530)

1. 15A NCAC 02D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

a. Emissions of particulate matter from the combustion of natural gas and No. 2 fuel oil that are discharged from the affected boiler **(ID No. ES-Boiler4)** into the atmosphere shall not exceed 0.325 pounds per million Btu heat input.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance General Condition JJ. If the results of this test are above the limits given in Section 2.1 E.1.a, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

[8]Ultra low sulfur liquid fuel means a distillate oil that has less than or equal to 15 ppm sulfur per 40 CFR 63.7575.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for particulate emissions from the firing of No. 2 fuel oil in the boiler **(ID No. ES-Boiler4)**.

2. 15A NCAC 02D .0524: New Source Performance Standards (40 CFR 60, Subpart Dc)

a. For the affected boiler, Boiler 4 **(ID No. ES-Boiler4)**, the Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524, "New Source Performance Standards" (NSPS) as promulgated in 40 CFR Part 60 Subpart Dc "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units," including Subpart A "General Provisions."

Emission Limitations

b. The maximum sulfur content of any fuel oil received and fired in the affected boiler **(ID No. ES-Boiler4)** shall not exceed 0.5 percent by weight. [40 CFR 60.42c(d)]
c. Visible emissions from the affected boiler **(ID No. ES-Boiler4)** shall not be more than 20 percent opacity when averaged over a six-minute period, except for one six-minute period per hour of not more than 27 percent opacity. [40 CFR 60.43c(c)]
d. The opacity standards in Section 2.1 E.2.c, above, applies at all times, except during periods of startup, shutdown or malfunction. [40 CFR 60.43c(d)]

Testing [15A NCAC 02Q .0508(f)]

e. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limits given in Section 2.1 E.2.b or E.2.c, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.
f. The Permittee shall conduct an initial performance tests as specified in the following paragraphs:
    i. To demonstrate compliance with the opacity limit in Section 2.1 E.2.c, above, the initial performance test shall be conducted using Method 9 of Appendix A-4 of 40 CFR Part 60 and in accordance with General Condition JJ and as specified in the following paragraphs. [40 CFR 60.47c(a)]
        (A) the Permittee shall conduct the performance test within 180 days of initial startup.
        (B) the Permittee shall conduct subsequent Method 9 of Appendix A-4 of 40 CFR Part 60 performance tests according to the schedule specified in Section 2.1 E.2.h, below.
        (C) the observation period for Method 9 of Appendix A-4 of 40 CFR Part 60 performance tests may be reduced from 3 hours to 60 minutes if all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation.
    ii. To demonstrate compliance with the SO_2 limits in Section 2.1 E.2.b, above, the performance test shall consist of the certification from the fuel supplier, according to Section 2.1 E.2.g, below. [40 CFR 60.44c(h)]

    If the results of this test are above the limits in Section 2.1 E.2.c, above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

Fuel Sulfur Monitoring [15A NCAC 02Q .0508(f)]

g. To ensure compliance with the fuel sulfur limit in Section 2.1 E.2.b, above, the Permittee shall retain a copy of the fuel supplier certification for any fuel oil fired in Boiler 4 **(ID No. ES-Boiler4)**. The fuel supplier certification shall include the following information: [40 CFR 60.48c(f)]

i. The name of the oil supplier;
ii. The sulfur content of the oil (in percent by weight); and
iii. A statement from the oil supplier that the oil complies with the specification under the definition of distillate oil in 40 CFR 60.41c.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the sulfur content of the oil exceeds the limit provided in Section 2.1 E.2.b, above, or if fuel supplier certifications are not retained as described above. [40 CFR 60.46c(e), 40 CFR 60.48c(f)]

Opacity Monitoring [15A NCAC 02Q .0508(f)]

h. After completion of the initial performance testing in Section 2.1 E.2.f, above, the Permittee shall comply with visible emissions monitoring according to the following:
   i. The Permittee shall conduct subsequent Method 9 performance tests using the applicable schedule in Section 2.1 E.2.h.i.(A) through E.2.h.i.(D), below, as determined by the most recent Method 9 performance test results. The observation period for Method 9 performance tests may be reduced from 3 hours to 60 minutes if all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation. [40 CFR 60.47c(a)(1)]
      A. if no visible emissions are observed, a subsequent Method 9 performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted;
      B. if visible emissions are observed but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent Method 9 performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted;
      C. if the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent Method 9 performance test must be completed within 3 calendar months from the date that the most recent performance test was conducted; or
      D. if the maximum 6-minute average opacity is greater than 10 percent, a subsequent Method 9 performance test must be completed within 45 calendar days from the date that the most recent performance test was conducted.
   ii. If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 performance test, the Permittee may, as an alternative to performing subsequent Method 9 performance tests, elect to perform subsequent monitoring using Method 22 according to the procedures specified in Section 2.1 E.2.h.ii.(A) and E.2.h.ii.(B) below. [40 CFR 60.47c(a)(2)]
      (A) the Permittee shall conduct 10-minute observations (during normal operation) each operating day the affected boiler **(ID No. ES-Boiler4)** fires No. 2 fuel oil using Method 22 and demonstrate that the sum of the occurrences of any visible emissions is not in excess of 5 percent of the observation period (i.e., 30 seconds per 10-minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the initial 10-minute observation, immediately conduct a 30-minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period (i.e., 90 seconds per 30 minute period), the owner or operator shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is equal to or less than 5 percent during a 30-minute observation (i.e., 90 seconds) or conduct a new Method 9 performance test using the procedures in conditions i.(A) through (D), above, within 45 calendar days.
      (B) if no visible emissions are observed for 10 operating days during which No. 2 fuel oil is fired, observations can be reduced to once every 7 operating days during which No. 2

fuel oil is fired. If any visible emissions are observed, daily observations shall be resumed.

iii. If the source is not operating on the required date for the Method 9 performance test, the performance test shall be conducted the next time the source is operated for three or more daylight hours. [40 CFR 60.8(d)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the opacity monitoring is not conducted as specified.

Recordkeeping Requirements [15A NCAC 02Q .0508(f)]

i. The Permittee shall record and maintain records of the amounts of No. 2 fuel fired in the boiler **(ID No. ES-Boiler4)** during each month. [40 CFR 60.48c(g)(2)] The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if records of the amount of each fuel fired during each month are not maintained.

j. The Permittee shall maintain records of No. 2 fuel oil supplier certifications as specified in Section 2.1 E.2.g.i, above. [40 CFR 60.48c(e)(11), (f)(1)] The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if records of fuel sulfur content monitoring are not maintained.

k. The Permittee shall keep the following opacity monitoring records: [40 CFR 60.48c(c)(1), (2)]
   i. For each performance test conducted using Method 9 of appendix A-4 of 40 CFR Part 60, the Permittee shall keep the records including the following:
      (A) dates and time intervals of all opacity observation periods;
      (B) name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and
      (C) copies of all visible emission observer opacity field data sheets.
   ii. For each performance test conducted using Method 22 of appendix A-4 of 40 CFR Part 60, the Permittee shall keep the records including the following:
      (A) dates and time intervals of all visible emissions observation periods;
      (B) name and affiliation for each visible emission observer participating in the performance test;
      (C) copies of all visible emission observer opacity field data sheets; and
      (D) documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the Permittee to demonstrate compliance with the applicable monitoring requirements.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these opacity monitoring records are not maintained.

l. The Permittee shall maintain records of any occurrence and duration of any startup, shutdown, or malfunction in the operation the affected boiler **(ID No. ES-Boiler4)**. [40 CFR 60.7(b)] The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the records of startups, shutdowns, and malfunctions are not maintained.

m. All records required under Section 2.1 E.2.i through E.2.l, above, shall be maintained by the Permittee for a period of two years following the date of such record. [40 CFR 60.48c(i)] The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the records are not maintained for the duration of 2 years.

Notification [15A NCAC 02Q .0508(f)]

n. The Permittee shall submit a construction notification of the date construction of the affected boiler **(ID No. ES-Boiler4)** is commenced, postmarked no later than 30 days after such date. [40 CFR 60.7(a)(1)] The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the notification of construction is not submitted as required.

o. The Permittee shall submit an initial notification to the Regional Supervisor within 15 days of actual startup of the affected boiler **(ID No. ES-Boiler4)**. The notification shall include the design heat input capacity of the boiler and identification of fuels to be combusted in the boiler. [40 CFR 60.48c(a), 40 CFR 60.7(a)(3)] The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the initial notification is not submitted as required. [The initial notification requirement was met on January 24, 2020.]

p. The Permittee shall submit at least 30 days advance notice of a performance test conducted pursuant to Section 2.1 E.2.f. or 2.1 E.2.h. to the Regional Supervisor, DAQ to afford the DAQ the opportunity to have an observer present. If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, the Permittee shall notify the Regional Supervisor as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the Regional Supervisor by mutual agreement. [§60.8(d), §60.7(a)(6)]

Reporting Requirements [15A NCAC 02Q .0508(f)]

q. The Permittee shall submit performance test data from the initial and any subsequent opacity performance tests to NC DAQ the following [40 CFR 60.48c(b)]:
   i. a report containing the results of the initial performance tests conducted pursuant to Section 2.1 E.2.f.i postmarked no later than 180 days after initial startup of the boiler. [§60.8(a)].
   ii. a report containing the results of subsequent performance tests conducted pursuant to Section 2.1 E.2.h postmarked no later than 30 days after completion of performance tests. [15A NCAC 02Q .0508(i)(5)]

r. The Permittee shall submit a semiannual summary report postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of noncompliance from the requirements of this permit and excess emissions must be clearly identified. The summary report shall include the following information:
   i. Fuel supplier certification(s) for distillate fuel oil, as provided in Section 2.1 E.2.g of this permit; and
   ii. A certified statement signed by the Permittee that the records of fuel supplier certification(s) submitted represents all of the fuel fired at the affected boiler **(ID No. ES-Boiler4)** during the semiannual period.
   iii. Records from any subsequent performance tests as required in Section 2.1 E.2.k, above.
   iv. Excess emission reports for any excess visible emissions from Boiler 4 **(ID No. ES-Boiler4)** that occur during the reporting period. The report shall contain the information recorded in Section 2.1 E.2.k, above. [40 CFR 60.48c(c)]

3. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY Primary Operating Scenario (POS)

Applicability [40 CFR 63.7485, §63.7490(b), §63.7499(o)]

a. For this source **(ID Nos. ES-Boiler 4)** (*i.e., Limited -use boilers or process heaters*), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDDD "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" (Subpart 5D), including and Subpart A "General Provisions."

Definitions and Nomenclature [§63.7575]

b. For the purposes of this permit condition, the definitions and nomenclature contained in §63.7575 shall apply.
   i. Annual capacity factor means the ratio between the actual heat input to a boiler or process heater from the fuels burned during a calendar year and the potential heat input to the boiler or process heater had it been operated for 8,760 hours during a year at the maximum steady state design heat input capacity.
   ii. Limited-use boiler or process heater means any boiler or process heater that burns any amount of solid, liquid, or gaseous fuels and has a federally enforceable annual capacity factor of no more than 10 percent.
   iii. Ultra low sulfur liquid fuel means a distillate oil that has less than or equal to 15 ppm sulfur by weight.[9]

40 CFR Part 63 Subpart A General Provisions [§63.7565]

c. The Permittee shall comply with the requirements of 40 CFR 63 Subpart A General Provisions according to the applicability of Subpart A to such sources as identified in Table 10 to 40 CFR Part 63, Subpart DDDDD.

Compliance Date [§63.7495(a)]

d. The Permittee shall comply with the applicable requirements upon startup **of this source**.
   i. Pursuant to 63.7495(i) you must be in compliance with the applicable new source provisions of Subpart DDDDD on the effective date of the fuel switch or physical change if you own or operate a new industrial, commercial, institutional boiler or process heater and have switched fuels or made a physical change to the boiler or process heater that resulted in the applicability of a different subcategory.

Operating Restriction [15A NCAC 02Q .0508(f)]

e. This boiler shall meet the definition of a limited use boiler by maintaining an annual capacity factor of no more than 10 percent.[10]

Notifications [§63.7545 (c), (e), (h)]

f. i. As specified in §63.9(b)(4) and (5), the Permittee shall submit an Initial Notification to the DAQ not later than 15 days after the actual date of startup of the affected source. [§63.7545(c)] [The initial notification requirement was met on January 24, 2020.]
   ii. The Permittee shall submit an initial Notification of Compliance Status to the DAQ within 60 days of startup. The notification shall contain the following:
      (A) a description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, and description of the fuel(s) burned. [§63.7545(e)(1)] [This requirement was met on March 9, 2020.]
   iii. Pursuant to 40 CFR 63.7545(h), if the Permittee has switched fuels or made a physical change to the boiler or process heater and the fuel switch or physical change resulted in the applicability of a different subcategory, a notice of the date upon which you switched fuels or made the physical change must be made within 30 days of the switch/change. The notification must include the requirements found in §63.7545(h).
   iv. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in Section 2.1 E.3.f are not met.

[9]Per definition of ultra low sulfur liquid fuel, 15 ppm equates to 0.0015% weight – Maximum Fuel Sulfur Content.
[10]No more than 28,610.2 million Btu per year heat input (204,358 gallons per year ultra low sulfur liquid fuel).

Work Practice Standards [15A NCAC 02Q .0508(f)]

g. i. The Permittee shall conduct a tune-up every 5 years while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up, as specified below:
(A) as applicable, inspect the burner, and clean or replace any components of the burner as necessary. The Permittee may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled or unscheduled shutdown but the burner must be inspected at least once every 72 months.
(B) inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
(C) inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown).
(D) optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NOX requirement to which the unit is subject.
(E) measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.
[§63.7500(a), §63.7540(a)(10), (a)(12)]

ii. Each 5-year tune-up shall be conducted no more than 61 months after the previous tune-up. The initial tune-up shall be conducted no later than 61 months after the initial startup of the source. [§63.7515(d)] Initial tune-up is due no later than February 10, 2025. [Boiler 4 commenced operation on January 10, 2020 per NOCS.]

iii. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup. [§63.7540(a)(13), §63.7515(g)]

iv. At all times, you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [§63.7500(a)(3)]

v. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in Section 2.1 E.3.g are not met.

Recordkeeping Requirements [15A NCAC 02Q .0508(f)]

h. The Permittee shall:
i. keep a copy of each notification and report submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status or compliance report that has been submitted, according to the requirements in §63.10(b)(2)(xiv). [§63.7555(a)(1)]
ii. maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (A) through (C) below:

(A) the concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;
(B) a description of any corrective actions taken as a part of the tune-up; and
(C) the type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.
[§63.7540(a)(10)(vi)]

iii. keep the associated records for Section 2.1 E.3.g.
iv. keep fuel use records for the days the boiler or process heater was operating. [§63.7525(k) and §63.7555(a)(3)]
v. keep records of the annual capacity factor calculation;
vi. keep a copy of the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent as specified in paragraph (a)(3) of §63.7555
vii. keep:
(A) records in a form suitable and readily available for expeditious review;
(B) each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record;
(C) each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records offsite for the remaining 3 years.
[§63.7560, §63.10(b)(1)]
viii. be deemed in noncompliance with 15A NCAC 02D .1111 if records are not maintained pursuant to Section 2.1 E.3.h.

Reporting Requirements [15A NCAC 02Q .0508(f)]

i. i. The Permittee shall submit compliance reports to the DAQ on a 5-year basis. The first report shall cover the period beginning on the compliance date specified in Section 2.1 E.3.d. (i.e., start-up) and ending on the earliest December 31st less than five years from the compliance date. Subsequent 5-year reports shall cover the periods from January 1 to December 31. The Permittee shall submit the compliance reports postmarked on or before January 30 for the preceding compliance period. [§63.7550(a), (b)]
ii. The compliance report must also be submitted electronically via the Compliance and Emissions Data Reporting Interface (CEDRI). CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (https://cdx.epa.gov/).) You must use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, you may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (http://www.epa.gov/ttn/chief/cedri/index.html), once the XML schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate address listed in §63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI. [§63.7550(h)(3)]
iii. The compliance report must contain the following information:
(A) Company name and address;
(B) Process unit information, emissions limitations, and operating parameter limitations;
(C) Date of report and beginning and ending dates of the reporting period;
(D) Include the date of the most recent tune-up for each unit required according to Section 2.1 E.3.f. Include the date of the most recent burner inspection if it was not done on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown.

(E) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.
(F) The total operating time during the reporting period.
[§63.7550(a) and (c), Table 9]

iv. The compliance report shall contain the calculations for the annual capacity factor for the previous calendar year.
v. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the reporting requirements in Section 2.1 E.3.i are not met.

4. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY Alternative Operating Scenario (AOS)

Applicability [40 CFR 63.7485, §63.7490(b), §63.7499(q), (u)]

a. For this source **(ID Nos. ES-Boiler4)** (*i.e., units designed to burn light liquid fuel greater than 10 MMBtu/hr with oxygen trim*), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDDD "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" (Subpart 5D), including Subpart A "General Provisions."

Definitions and Nomenclature [§63.7575]

b. For the purpose of this permit condition, the definitions and nomenclature contained in §63.7575 shall apply.
   i. Ultra low sulfur liquid fuel means a distillate oil that has less than or equal to 15 ppm sulfur by weight.[11]

40 CFR Part 63 Subpart A General Provisions [§63.7565]

c. The Permittee shall comply with the requirements of 40 CFR 63 Subpart A General Provisions according to the applicability of Subpart A to such sources as identified in Table 10 to 40 CFR Part 63, Subpart DDDDD.

Compliance Dates [§63.7495(a)(i), §63.7510(f)(g)]

d. The Permittee shall:
   i. complete the initial tune up by the date specified in Section 2.1 E.4.m.ii.
   ii.. complete the initial compliance testing and monitoring requirements in Sections 2.1 E.4.j. and l. within 180 days after startup.
   iii. be in compliance with the applicable new source provisions of Subpart DDDDD on the effective date of the fuel switch or physical change if you own or operate a new industrial, commercial, institutional boiler or process heater and have switched fuels or made a physical change to the boiler or process heater that resulted in the applicability of a different subcategory pursuant to 63.7495(i).

General Compliance Requirements [§63.7505(a), §63.7500, 63.7515(h)]

e. At all times the affected unit is operating, the Permittee shall be in compliance with the emission standards in Section 2.1 E.4.g, except during periods of startup and shutdown, and burn ultra

[11] Ibid 9

low sulfur distillate fuel oil. During startup and shutdown, the Permittee shall comply only with items 5 and 6 of Table 3 of Subpart 5D.

f. At all times, the Permittee shall operate and maintain any affected source (as defined in §63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

Emission Limits [15A NCAC 02Q .0508(f), §63.7500(a)(1), Table 1]

g. The affected units shall meet the following emission limits:

Pollutant	Emission Limit
Hydrochloric Acid(HCl)	4.4E-04 lb per MMBtu of heat input
Mercury (Hg)	4.8E-07 lb per MMBtu of heat input
Carbon monoxide (CO)	130 ppm by volume on a dry basis corrected to 3 percent oxygen
Filterable Particulate Matter(PM) or Total Suspended Metals (TSM)	1.1E-03 lb per MMBtu of heat input or 2.9E-05 lb per MMBtu of heat input

Testing [15A NCAC 02Q .0508(f)]

h. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test(s) are above the limit given in Section 2.1 E.4.g above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.

Notifications [§63.7545(c),(d),(e),(h)]

i. i. As specified in §63.9(b)(4) and (5), the Permittee shall submit an Initial Notification to the DAQ not later than 15 days after the actual date of startup of the affected source. [§63.7545(c)]

ii. The Permittee shall submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin.

v. For the initial compliance demonstration for each affected source, the Permittee shall submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of all performance test and/or other initial compliance demonstrations for all affected sources at the facility. The Notification of Compliance Status report must contain all the information specified in paragraphs (e)(1) through (8) of §63.7545 as applicable.

vi. Pursuant to 40 CFR 63.7545(h), if the Permittee has switched fuels or made a physical change to the boiler or process heater and the fuel switch or physical change resulted in the applicability of a different subcategory, a notice of the date upon which you switched fuels or made the physical change must be made within 30 days of the switch/change. The notification must include the requirements found in §63.7545(h).

iv. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in Section 2.1 E.4.i are not met.

Initial compliance requirements [15A NCAC 02Q .0508(f), §63.7510]

j. The Permittee shall demonstrate compliance with the limits in Section 2.1 E.4.g. by conducting initial performance test(s) and fuel analyses, establishing operating limits and conducting continuous monitoring system (CMS) evaluation(s) as necessary according to §63.7510, §63.7525 and §63.7530 within 180 days of startup. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these requirements are not met.

Subsequent compliance requirements [15A NCAC 02Q .0508(f), §63.7515]

k. The Permittee shall:
   i. conduct subsequent performance tests and fuel analyses as necessary according to §63.7515.
   ii. burn ultra low sulfur distillate fuel in Boiler 4 (ID No. ES-Boiler4) at all times [40 CFR 63.7515(h)]. If the affected boiler or process heater combusts ultra-low sulfur liquid fuel, the Permittee does not need to conduct further performance tests (stack tests or fuel analyses) if the pollutants measured during the initial compliance performance tests meet the emission limits in Section 2.1 E.4.g, providing the Permittee demonstrates ongoing compliance with the emissions limits by monitoring and recording the type of fuel combusted on a monthly basis.
   iii. demonstrate continuous compliance with each emission limit and operating limit that applies according to §63.7540.
   iv. be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in Section 2.1 E.4.k are not met.

Monitoring Requirements and Operating Limits [15A NCAC 02Q .0508(f), §63.7525, §63.7500, Table 4 to Subpart 5D]

l. The Permittee shall:
   i. install, operate, and maintain an oxygen trim system, as defined in §63.7575, with the oxygen level set no lower than the lowest hourly average oxygen concentration measured during the most recent CO performance test. [§63.7525(a)(7)]. The oxygen level shall be no lower than **X percent [established during performance testing and incorporated per Specific Condition 2.1 E.4.o.(iii)(B)].**
   ii. install, operate and maintain a CMS for operating load and maintain the 30-day rolling average operating load of each unit such that it does not exceed 110 percent of the highest hourly average operating load recorded during the most recent performance test. [Table 7 to MACT 5D]. The 30-day rolling average operating load shall not exceed **XYZ *(in appropriate units)* [established during performance testing and incorporated per Specific Condition 2.1 E.4.o.(iii)(B)].**
   iii. meet the requirements for all monitoring systems (CMS) as applicable according to §63.7525(d).
   iv. develop a site-specific monitoring plan according to the requirements in §63.7505(d)(1) through (4) for the use of any CMS. [§63.7505(d)].
   v. meet the operating limits as follows: Operation above the maximum or below the minimum operating limits shall constitute a deviation of the established operating limits above except during performance tests conducted to determine compliance with the emission limits or to establish new operating limits. Operating limits must be confirmed or reestablished during performance tests. [§63.7540(a)(1)]
   vi. be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in Section 2.1 E.4.l are not met.

Work Practice Standards [15A NCAC 02Q .0508(f)]

m. i. The Permittee shall conduct a tune-up every 5 years while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up, as specified below:
(A) as applicable, inspect the burner, and clean or replace any components of the burner as necessary. The Permittee may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled or unscheduled shutdown but the burner must be inspected at least once every 72 months.
(B) inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
(C) inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown).
(D) optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NOX requirement to which the unit is subject.
(E) measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.
[§63.7500(a), §63.7540(a)(10), (a)(12)]

ii. Each 5-year tune-up shall be conducted no more than 61 months after the previous tune-up. The initial tune-up shall be conducted no later than 61 months after the initial startup of the source. [§63.7515(d)]

iii. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.[§63.7540(a)(13), §63.7515(g)]

iv. At all times, you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [§63.7500(a)(3)]

v. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in Section 2.1 E.4.m are not met.

Recordkeeping Requirements [15A NCAC 02Q .0508(f)]

n. The Permittee shall:

i. keep a copy of each notification and report submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status or compliance report that has been submitted, according to the requirements in §63.10(b)(2)(xiv). [§63.7555(a)(1)]

ii. keep records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations. [§63.10(b)(2)(viii)]

iii. maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (A) through (C) below:

(A) the concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;
(B) a description of any corrective actions taken as a part of the tune-up; and
(C) the type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.
[§63.7540(a)(10)(vi)]

iv. for each continuous monitoring system (CPMS and CMS), keep records according to paragraphs (b)(1) through (5) of §63.7555.

v. keep records required in Table 8 of Subpart 5D including records of all monitoring data and calculated averages for applicable operating limits, such as opacity, pressure drop, pH, and operating load, to show continuous compliance with each emission limit and operating limit that applies.

vi. keep the applicable records in paragraphs (d)(1) through (13) of §63.7555.

vii. keep:
(A) records in a form suitable and readily available for expeditious review;
(B) each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record;
(C) each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records offsite for the remaining 3 years.
[§63.7560, §63.10(b)(1)]

viii. be deemed in noncompliance with 15A NCAC 02D .1111 if records are not maintained pursuant to Section 2.1 E.4.n.

Reporting Requirements [15A NCAC 02Q .0508(f)]

o. i. The Permittee shall submit a compliance report to the DAQ on a semiannual basis, postmarked on or before January 30 for the preceding six-month period between July and December and July 30 for the preceding six-month period between January and June.
(A) The first semiannual compliance report shall cover the period beginning on the compliance date specified in Section 2.1 E.4.d (i.e., start-up) and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified in Section 2.1 E.4.d.
(B) The compliance reports shall also be submitted electronically to the EPA via the procedures in §63.7550(h).

ii. The compliance report shall contain:
(A) The information in §63.7550(c) as applicable.
(B) For each deviation from an emission limit or operating limit, the report shall contain the information in§§63.7550(d) and (e) as applicable.

iii. Within 60 days after the date of completing each performance test (defined in §63.2) including any associated fuel analyses and/or CEMS performance evaluation (defined in §63.2) as required by Subpart 5D, the Permittee shall submit the results to the DAQ and also directly to the EPA electronically via the procedures in §63.7550(h).
(A) This report must also verify that the operating limits in Section 2.1 E.4.l. have not changed or provide documentation of revised operating limits established according to §63.7530 and Table 7 to Subpart 5D, as applicable. The reports for all subsequent performance tests must include all applicable information required in §63.7550.
[§63.7515(f)]

(B) If performance testing indicates compliance with emission limits is demonstrated with revisions to operating limits that are more stringent than the established minimum or maximum operating limits in Section 2.1 E.4.l., the Permittee shall submit a request to revise the values in the permit at the same time as the test report is submitted. The permit revision will be processed pursuant to 15A NCAC 02Q .0514.

(C) If performance testing indicates that compliance with emission limits is demonstrated with revisions to operating limits that are less stringent than the established minimum or maximum operating limits in Section 2.1 E.4.l., the Permittee may request to revise the values in the permit pursuant to 15A NCAC 02Q .0515.

iv. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in Section 2.1 E.4.o. are not met.

5. 15A NCAC 02Q .0508(j): ALTERNATIVE OPERATING SCENARIOS [15A NCAC 02Q .0508(j)]

a. The Permittee, contemporaneously with making a change from one alternative operating scenario to another, while operating the oil-fired boiler **(ID No. ES-Boiler4)** shall record in a logbook (written or electronic format) the scenario under which it is operating.
b. The Permittee shall submit a permit application to the DAQ within 30 days to remove the limited-use operating scenario from the permit in the event the 10% annual capacity factor is exceeded and the boiler will revert to the light liquid fuel subcategory per 40 CFR 63.7499(u) permanently.
c. Pursuant to 63.7495(i) you must be in compliance with the applicable new source provisions of Subpart DDDDD on the effective date of the fuel switch or physical change if you own or operate a new industrial, commercial, institutional boiler or process heater and have switched fuels or made a physical change to the boiler or process heater that resulted in the applicability of a different subcategory.
d. Pursuant to 40 CFR 63.7545(h), if the Permittee exceeds the 10% annual capacity factor, a notice of the date upon which you switched operating scenarios must be made within 30 days of the switch/change. The notification must identify:
   i. The name of the owner or operator of the affected source, as defined in 40 CFR 63.7490, the location of the source, the boiler and process heater that have switched fuels or were physically changed, and the date of the notice.
   ii. The currently applicable subcategory under Subpart DDDDD.
   iii. The date upon which the fuel switch or physical change occurred.
e. Approved DAQ fuel heating value of 140,000 Btu per gallon shall be used when calculating fuel usage.
f. Oil-fired boiler (ID No. ES-Boiler4) while operating as a limited-use boiler shall not exceed more than 204,362.0 gallons per consecutive 12-month period

F. One wood-fired boiler with flyash reinjection (ID No. ES-Boiler3) with associated multicyclones (ID Nos. CD-Boiler3-1 and CD-Boiler3-2), installed in series and one electrostatic precipitator (ID No. CD-ESP-3)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter (including PM_{10})	0.376 pounds per million Btu heat input	15A NCAC 02D .0504
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 02D .0516
Visible emissions	20 percent opacity [40 CFR 60.43c(c), 60.43c(d) and 60.47c(f)]	15A NCAC 02D .0524 (40 CFR Part 60, Subpart Dc)
Particulate matter	0.030 pounds per million Btu heat input [40 CFR 60.43c(e), 60.43c(d) and 60.47c(f)]	15A NCAC 02D .0524 (40 CFR Part 60, Subpart Dc)
-	Initial notification of start-up [60.48c(a)] Records of amount of wood combusted during each day [60.48c(g)]	15A NCAC 02D .0524 (40 CFR 60, Subpart Dc)
Hazardous air pollutants	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters Compliance beginning upon startup **See Section 2.1 F.4**	15A NCAC 02D .1111 (40 CFR Part 63, Subpart DDDDD)
Odors	State-enforceable only **See Section 2.2 A.1**	15A NCAC 02D .1806
Particulate Matter Nitrogen Oxides CO_2 equivalent	**See Section 2.2 A.2**	15A NCAC 02Q .0317 (PSD Avoidance for 15A NCAC 02D .0530)

1. 15A NCAC 02D .0504: PARTICULATES FROM WOOD BURNING INDIRECT HEAT EXCHANGERS

a. Emissions of particulate matter from the combustion of wood that are discharged from this source **(ID No. ES-Boiler3)** into the atmosphere shall not exceed **0.376** pounds per million Btu heat input.

Testing [15A NCAC 02Q .0508(f)]

b. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limit above by testing this source **(ID No. ES-Boiler3)** for particulate matter with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in General Condition JJ. Testing shall be completed and the results submitted within 180 days of beginning operation unless an alternate date is approved by the DAQ. If the results of this or any test are above the limit given in Section 2.1 F.1.a above or if the testing is not conducted as described above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0504 and the Permittee shall resume performance testing on an annual basis, beginning no more than 13 months after the previous performance test.

Monitoring [15A NCAC 02Q .0508(f)]

c. Particulate matter emissions from this source **(ID No. ES-Boiler3)** shall be controlled by the multicyclones **(ID Nos. CD-Boiler3-1 and CD-Boiler3-2)** and an electrostatic precipitator **(ID No. CD-ESP-3)**. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement must include the following:
   i. a monthly external visual inspection of the system ductwork, multicyclone material collection units, and electrostatic precipitator housing unit and hopper for leaks;
   ii. an annual (for each 12-month period following initial inspection) internal inspection of the multicyclones' structural integrity;
   iii. daily ESP inspections to verify the proper functioning of electronic controls for corona power and rapper operation, to verify that the corona wires are energized, and to verify that adequate air pressure is present on the rapper manifold; and
   iv. inspections of the interior of the electrostatic precipitator to determine the condition and integrity of corona wires, collection plates, plate rappers, hopper, and air diffuser plates every 24 months.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0504 if the multicyclones, ESP, and ductwork are not inspected and maintained.

Recordkeeping Requirements [15A NCAC 02Q .0508(f)]

d. The results of inspections and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each inspection;
   iii. a report of any maintenance performed on any control device; and
   iv. any variance from manufacturer's recommendations, if any, and any corrections made.

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0504 if these records are not maintained.

Reporting Requirements [15A NCAC 02Q .0508(f)]

e. Within 30 days of a written request from the DAQ, the Permittee shall submit a report of any maintenance performed on any control device.
f. The Permittee shall submit a summary report of monitoring and recordkeeping activities given in Section 2.1 F.1.c and F.1.d, above, postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

a. Emissions of sulfur dioxide from this source **(ID No. ES-Boiler3)** shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 F.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

Monitoring/Recordkeeping/Reporting Requirements [15A NCAC 02Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of wood in this source **(ID No. ES-Boiler3)**.

3. 15A NCAC02D .0524: NEW SOURCE PERFORMANCE STANDARDS for 40 CFR Part 60, Subpart Dc

Applicability [40 CFR 60.40c(a)]

a. For this boiler **(ID No ES-Boiler3)**, the Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards" (NSPS) as promulgated in 40 CFR 60 Subpart Dc "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units," including Subpart A "General Provisions".

Definitions and Nomenclature

b. For the purpose of this permit condition, the definitions and nomenclature contained in §60.41c shall apply.

Compliance Date

c. Except as specified in §60.8 (a)(1) through(4), within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup, the Permittee shall conduct performance test(s) pursuant to Section 2.1 F.3.e.i. [§60.8(a), §60.45(c)(a)]

Emission Limitations [15A NCAC 2Q .0508(f)]

d. i. On and after the date on which the initial performance test is completed or required to be completed under Section 2.1 F.3.c., whichever date comes first:
   (A) PM emissions from the boiler shall not exceed 0.030 lb/MMBtu heat input. [§60.43c(e)(1)]
   (B) Visible emissions shall not be more than 20 percent opacity when averaged over a six-minute period, except for one six-minute period per hour of not more than 27 percent opacity. [§60.43c(c)]

   ii. The PM and opacity standards apply at all times, except during periods of startup, shutdown, or malfunction. [§60.43c(d)]

Testing [15A NCAC 2Q .0508(f)]

e. i. (A) The Permittee shall conduct an initial performance test for PM and opacity consistent with §60.45c and General Condition JJ.
   (B) The Permittee shall submit, for compliance purposes, continuous opacity monitoring system (COMS) data results produced during any performance test required under §60.8 in lieu of Method 9 observation data. [§60.11(d)(5)]
   (C) If the results of these or any tests are above any limit given in Section 2.1 F.3.d. above or if the testing is not conducted as described above, the Permittee shall be deemed in

noncompliance with 15A NCAC 02D .0524 and the Permittee shall resume performance testing on an annual basis, beginning no more than 13 months after the previous performance test.

ii. Under the provisions of NCGS 143-215.108 and pursuant to §60.45c(a), the Permittee shall demonstrate compliance with the PM emission limit in section 2.1 F.3.d.i.(A) above on an annual basis in accordance with General Condition JJ. If the results of this test are less than 80 percent of the emission limit in section 2.1 F.3.d.i.(A) above, the Permittee shall be required to stack test only once every five years following the previous stack test. If the results of this test are above the limit given in Section 2.1 F.3.d.i.(A) above or the testing requirement is not met, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524. [§60.45c]

Opacity Monitoring [15A NCAC 2Q .0508(f)]

f. i. The Permittee shall calibrate, maintain, and operate a continuous monitoring system (COMs) for measuring the opacity of emissions discharged to the atmosphere and record the output of the system. [§60.47c(a)]

ii. The COMS shall be calibrated, maintained, and tested in accordance with §60.13 and 15A NCAC 02D .0613.

ii. The COMs shall be operated in accordance in accordance with the applicable procedures under 40 CFR 60, Appendix B Performance Specification 1. The span value of the opacity COMS shall be between 60 and 80 percent. [§60.47c(b)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these requirements are not met.

Recordkeeping Requirements [15A NCAC 02Q .0508(f)]

g. The Permittee shall maintain:

i. records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. [§60.7(b)]

ii. records of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; recorded in a permanent form suitable for inspection. [§60.7(f)]

iii. records of the amounts of each fuel combusted during each operating day. [§60.48c(g)(1)]

iv. retain records for at least two years following the date of such measurements, maintenance, reports, and records. [§60.7(f), §60.48c(i)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these requirements are not met.

Reporting/Notifications Requirements [15A NCAC 2Q .0508(f)]

h. The Permittee shall submit:

i. semiannually an excess emissions and continuous monitoring system performance report and/or a summary report consistent with 40 CFR 60.7(c). The semiannual report shall be calculated on a quarterly basis and contain the monitoring and recordkeeping activities given in Section 2.1 F.3. f through g above. The semiannual report shall be postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period

between January and June. All instances of noncompliance from the requirements of this permit and excess emissions must be clearly identified. [§60.48c(b), (c), and (j); §60.7(c) and (d)]

ii. for the COMS, an excess emissions and monitoring system performance report and/or summary reports. The reports shall contain the information required per §60.7(c) and (d).

iii. a notification of the actual date of initial startup of the boiler to the Regional Supervisor, DAQ, postmarked within 15 days after such date. [§60.7(a)(3), §60.48c(a)]

iv. at least 30 days advance notice of any performance test to the Regional Supervisor, DAQ to afford the DAQ the opportunity to have an observer present. If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, the Permittee shall notify the Regional Supervisor as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the Regional Supervisor by mutual agreement. §60.8(d), §60.7(a)(5) and (7)]

v. (A) a report containing the results of the initial performance tests conducted pursuant to Section 2.1 F.3.i. postmarked no later than 180 days after initial startup of the boiler. [§60.48c(b), §60.8(a)]

(B) a report containing the results of subsequent performance tests conducted pursuant to Section 2.1 F.3.i. postmarked no later than 30 days after completion of performance tests. [§60.48c(b), 15A NCAC 02Q .0508(i)(5)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the requirements in paragraphs i. through v are not met.

4. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

Applicability [40 CFR 63.7485, §63.7490(b), §63.7499(i), (p)]

a. For this source **(ID No. ES-Boiler3)** (*i.e., new Stokers/sloped grate/other units designed to burn wet biomass/bio-based solid with a heat input capacity 10 million Btu per hour or greater and controlled by multicyclone with dry ESP and oxygen trim system*), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDDD "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" (Subpart 5D), including Subpart A "General Provisions."

Definitions and Nomenclature [§63.7575]

b. For the purpose of this permit condition, the definitions and nomenclature contained in 40 CFR 63.7575 shall apply.

40 CFR Part 63 Subpart A General Provisions [§63.7565]

c. The Permittee shall comply with the requirements of 40 CFR 63 Subpart A General Provisions according to the applicability of Subpart A to such sources as identified in Table 10 to Subpart DDDDD.

Compliance Date [§63.7495(a) §63.7510(f), (g)]

d. The Permittee shall:

i. complete the initial tune up by the date specified in **Section 2.1 F.4.m.ii.**

ii.. complete the initial compliance testing and monitoring requirements in **Section 2.1 F.4.j.** within 180 days after startup.

General Compliance Requirements [§63.7500, §63.7505(a)]

e. At all times the affected unit(s) is operating, the Permittee shall be in compliance with the emission standards in **Section 2.1 F.4.g.**, except during periods of startup and shutdown. During startup and shutdown, the Permittee shall comply only with **Section 2.1 F.4.n. and o**. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these requirements are not met.

f. At all times, then Permittee shall operate and maintain any affected source (as defined in §63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

Emission Limits [15A NCAC 02Q .0508(f), §63.7500(a)(1), Table 1]

g. The affected unit(s) shall meet the following emission limits:

Pollutant	Emission Limit
Hydrochloric Acid (HCl)	2.2E-02 lb per MMBtu of heat input
Mercury (Hg)	8.0E-07 lb per MMBtu of heat input
Carbon monoxide (CO)	620 ppm by volume on a dry basis corrected to 3 percent oxygen, 3 run average
Filterable Particulate Matter (PM)	3.0E-02 lb per MMBtu of heat input

Testing [15A NCAC 02Q .0508(f)]

h. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test(s) are above the limit given in **Section 2.1 F.4.g.** above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.

Notifications [15A NCAC 02Q .0508(f)]

i. i. As specified in §63.9(b)(4) and (5), the Permittee shall submit an Initial Notification to the DAQ not later than 15 days after the actual date of startup of the affected source. [§63.7545(c)]

ii. The Permittee shall submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin. [§63.7545(d)]

iii. For the initial compliance demonstration for each affected source, the Permittee shall submit the Notification of Compliance Status (NOCS), including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of all performance test and/or other initial compliance demonstrations for all affected sources at the facility. The NOCS report must contain all the information specified in paragraphs (e)(1) through (8) of §63.7545 as applicable. [§63.7545(e)]

iv. The Permittee shall submit a permit application with the NOCS to establish the monitoring parameters in **Section 2.1 F.4.l.**

v. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in **Section 2.1 F.4.i.** are not met.

Initial Compliance Requirements [15A NCAC 02Q .0508(f), §63.7510]

j. The Permittee shall demonstrate compliance with the limits in **Section 2.1 F.4.g.** by conducting initial performance test(s) and fuel analyses, establishing operating limits and conducting continuous monitoring system (CMS) evaluation(s) as necessary according to §§63.7510, 63.7525 and 63.7530. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these requirements are not met.

Subsequent Compliance Requirements [15A NCAC 02Q .0508(f), §63.7515]

k. The Permittee shall:
   i. conduct subsequent performance tests and fuel analyses as necessary according to §63.7515.
      (A) you must conduct all applicable performance tests according to §63.7520 on an annual basis, except as specified in §63.7515(b) through (e), (g), and (h). Annual performance tests shall be completed no more than 13 months after the previous performance test, except as specified in §63.7515(b) through (e), (g), and (h).
      (B) if the performance tests for a given pollutant for at least 2 consecutive years show that the emissions are at or below 75 percent of the emission limit (or, in limited instances as specified in Tables 1 and 2 or 11 through 13 to this subpart, at or below the emission limit) for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, the Permittee may choose to conduct performance tests for the pollutant every third year. Each such performance test must be conducted no more than 37 months after the previous performance test.
      (C) under the provisions of NCGS 143-215.108, if the compliance test shows that the emission rate is more than 75 percent of the allowable limit, the stack test frequency shall be increased to once every year. If the results of this or any test are above the limit given in Section 2.1 F.4.g above or if the testing is not conducted as described above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 and the Permittee shall resume performance testing on an annual basis, beginning no more than 13 months after the previous performance test.
   ii.. demonstrate continuous compliance with each emission limit and operating limit that applies according to §63.7540.
   iii. be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in **Section 2.1 F.4.k.** are not met.

Monitoring Requirements and Operating Limits [15A NCAC 02Q .0508(f), §63.7525, §63.7500, Table 4 to Subpart 5D]

l. The Permittee shall:
   i. install, operate, and maintain an oxygen trim system, as defined in §63.7575, with the oxygen level set no lower than the lowest hourly average oxygen concentration measured during the most recent CO performance test. [§63.7525(a)(7)]. The oxygen level shall be no lower than **XX percent.**
   ii install, operate, certify and maintain a COMS (CMS) according to the procedures in§63.7525(c)(1) through(7) and maintain opacity to less than or equal to 10 percent opacity or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM emission limitation (daily block average). The daily opacity block average value shall not exceed **X percent.**[12]

[12] Table 4 to Subpart DDDDD reads that "Existing and new boilers and process heaters must maintain opacity to less than or equal to 10 percent opacity or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM (or TSM) emission limitation (daily block average)."

iii. install, operate and maintain a CMS for operating load and maintain the 30-day rolling average operating load of each unit such that it does not exceed 110 percent of the highest hourly average operating load recorded during the most recent performance test. [Table 7 to MACT 5D]. The 30-day rolling average operating load shall not exceed **X lb/hr steam.**

iv. meet the requirements for all monitoring systems (CMS) as applicable according to §63.7525(d).

v. develop a site-specific monitoring plan according to the requirements in §63.7505(d)(1) through (4) for the use of any CMS. [§63.7505(d)].

vi. meet the operating limits as follows: Operation above the maximum or below the minimum operating limits shall constitute a deviation of the established operating limits above except during performance tests conducted to determine compliance with the emission limits or to establish new operating limits. Operating limits must be confirmed or reestablished during performance tests. [§63.7540(a)(1)]

vii. be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in **Section 2.1 F.4.l.** are not met.

Work Practice Standards [15A NCAC 02Q .0508(f)]

Five Year Tune-up

m. i. The Permittee shall conduct a tune-up of the source(s) ever five years while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up as specified below:

(A) As applicable, inspect the burner, and clean or replace any components of the burner as necessary, The Permittee may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled or unscheduled unit shutdown, but the burner must be inspected at least once every 72 months;

(B) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

(C) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown);

(D) Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject; and

(E) Measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.

[§§63.7500(a), §63.7540(a)(10), (12)]

ii. Each tune-up shall be conducted no more than 61 months after the previous tune-up. The initial tune-up shall be conducted no later than 61 months after the initial startup of the source.
[40CFR 63.7515(d)]

iii. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup. [§63.7540(a)(13), §63.7515(g)]

iv. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in **Section 2.1 F.4.m.** are not met.

Startup Requirements [Table 3 to Subpart 5D]

n. During startup, the Permitee shall:
   i. operate all CMS during startup.
   ii. for startup of a boiler or process heater, must use one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, fuel oil-soaked rags, kerosene, hydrogen, paper, cardboard, refinery gas, liquefied petroleum gas, clean dry biomass, and any fuels meeting the appropriate HCl, mercury and TSM emission standards by fuel analysis.
   iii. have the option of complying using either of the following work practice standards.
      (A) If you choose to comply using definition (1) of "startup" in §63.7575, once you start firing fuels that are not clean fuels, you must vent emissions to the main stack(s) and engage all of the applicable control devices except limestone injection in fluidized bed combustion (FBC) boilers, dry scrubber, fabric filter, and selective catalytic reduction (SCR). You must start your limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR systems as expeditiously as possible. Startup ends when steam or heat is supplied for any purpose, OR
      (B) If you choose to comply using definition (2) of "startup" in §63.7575, once you start to feed fuels that are not clean fuels, you must vent emissions to the main stack(s) and engage all of the applicable control devices so as to comply with the emission limits within 4 hours of start of supplying useful thermal energy. You must engage and operate PM control within one hour of first feeding fuels that are not clean fuels. You must start all applicable control devices as expeditiously as possible, but, in any case, when necessary to comply with other standards applicable to the source by a permit limit or a rule other than this subpart that require operation of the control devices. You must develop and implement a written startup and shutdown plan, as specified in §63.7505(e).
   iv. comply with all applicable emission limits at all times except during startup and shutdown periods at which time you must meet this work practice. You must collect monitoring data during periods of startup, as specified in §63.7535(b). You must keep records during periods of startup. You must provide reports concerning activities and periods of startup, as specified in §63.7555.

Shutdown Requirements [Table 3 to Subpart 5D]

o. During shutdown, the Permittee shall:
   i. operate all CMS during shutdown.
   ii. while firing fuels that are not clean fuels during shutdown, you must vent emissions to the main stack(s) and operate all applicable control devices, except limestone injection in FBC boilers, dry scrubber, fabric filter, and SCR but, in any case, when necessary to comply with other standards applicable to the source that require operation of the control device.
   iii. if, in addition to the fuel used prior to initiation of shutdown, another fuel must be used to support the shutdown process, that additional fuel must be one or a combination of the following clean fuels: Natural gas, synthetic natural gas, propane, other Gas 1 fuels, distillate oil, syngas, ultra-low sulfur diesel, refinery gas, and liquefied petroleum gas.
   iv. shall comply with all applicable emissions limits at all times except for startup or shutdown periods conforming with this work practice. You must collect monitoring data during periods of shutdown, as specified in §63.7535(b). You must keep records during periods of shutdown. You must provide reports concerning activities and periods of shutdown, as specified in §63.7555.

Recordkeeping Requirements [15A NCAC 02Q .0508(f), §63.7555]

p. The Permittee shall:
   i. keep a copy of each notification and report submitted to comply with Subpart 5D, including all documentation supporting any Initial Notification or Notification of Compliance Status, or semiannual compliance report that has been submitted. [§§63.7555(a)(1), 63.10(b)(2)(xiv)]
   ii. keep records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations. [§63.10(b)(2)(viii)]
   iii. maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (A) through (C) below:
      (A) The concentrations of carbon monoxide in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;
      (B) A description of any corrective actions taken as a part of the tune-up; and
      (C) the type and amount of fuel used over the 12 months prior to the annual adjustment, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.
      [§63.7540(a)(10)(vi)]
   iv. for each CMS, keep records according to paragraphs (b)(1) through (5) of §63.7555.
   v. keep records required in Table 8 of Subpart 5D including records of all monitoring data and calculated averages for applicable operating limits, such as opacity and operating load, to show continuous compliance with each emission limit and operating limit that applies.
   vi. keep the applicable records in paragraphs (d)(1) through (13) of §63.7555.
   vii. keep:
      (A) records in a form suitable and readily available for expeditious review;
      (B) each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record; and
      (C) each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records offsite for the remaining 3 years.
      [§63.7560, §63.10(b)(1)]
   vii. be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in **Section 2.1 F.4.p.** are not met.

Reporting Requirements [15A NCAC 02Q .0508(f), §63.7550**]**

q. i. The Permittee shall, consistent with 40 CFR 60.7(c), submit semiannually an excess emissions and continuous monitoring system performance report and/or a summary report. The semiannual report shall be calculated on a quarterly basis and contain the monitoring and recordkeeping activities given in Section 2.1 F.4. l through p above. The semiannual report shall be postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.
      (A) The first semiannual compliance report shall cover the period beginning on the compliance date specified in **Section 2.1 F.4.d.** (i.e., start-up) and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified in **Section 2.1 F.4.d.**
      (B) The compliance reports shall also be submitted electronically to the EPA via the procedures in §63.7550(h).

ii. The compliance report shall contain:
(A) The information in §63.7550(c) as applicable.
(B) For each deviation from an emission limit or operating limit, the report shall contain the information in§§63.7550(d) and (e) as applicable.
(C) for COMS, an excess emissions and continuous monitoring system performance report and/or summary report according to §63.10(e)(3)(vii) or (viii). The reports shall contain the information specified in §63.10(e)(3)(v) and (vi).

iii. Within 60 days after the date of completing each performance test (defined in §63.2) including any associated fuel analyses and/or CEMS performance evaluation (defined in §63.2) as required by Subpart 5D, the Permittee shall submit the results to the DAQ and also directly to the EPA electronically via the procedures in §63.7550(h).
(A) This report must also verify that the operating limits in **Section 2.1 F.4.l.** have not changed or provide documentation of revised operating limits established according to §63.7530 and Table 7 to Subpart 5D, as applicable. The reports for all subsequent performance tests must include all applicable information required in §63.7550. [§63.7515(f)]
(B) If performance testing indicates compliance with emission limits is demonstrated with revisions to operating limits that are more stringent than the established minimum or maximum operating limits in **Section 2.1 F.4.l.**, the Permittee shall submit a request to revise the values in the permit at the same time as the test report is submitted. The permit revision will be processed pursuant to 15A NCAC 02Q .0514.
(C) If performance testing indicates that compliance with emission limits is demonstrated with revisions to operating limits that are less stringent than the established minimum or maximum operating limits in **Section 2.1 F.4.l.**, the Permittee may request to revise the values in the permit pursuant to 15A NCAC 02Q .0515.

iv. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in **Section 2.1 F.4.q.** are not met.

2.2 Multiple Emission Source(s) Specific Limitations and Conditions

A. Facility-wide Affected Sources

The following provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Odors	**State-enforceable Only** Odorous emissions must be controlled	15A NCAC 02D .1806
Particulate Matter Nitrogen Oxides CO_2 equivalent	**Facility-wide emission limits:** PM shall be less than 88.99 tons per consecutive 12-month period; NOx shall be less than 78.86 tons per consecutive 12-month period; CO_2 equivalent shall be less than 111,529.83 tons per consecutive 12-month period **Operational limit:** **Boilers** maximum combined heat input to all boilers **(ID Nos. ES-B1, ES-Boiler2, ES-Boiler3, and ES-Boiler4)** shall not exceed 669,731 million Btu per year	15A NCAC 02Q .0317 for 15A NCAC 02D .0530 – PSD Avoidance
Alternative Operating Scenarios	***Primary Operating Scenario (POS)* – (ID Nos. ES-B1 and ES-Boiler2)** ***Alternative Operating Scenario (AOS)* – (ID No. ES-Boiler4) as backup boiler for B1 and Boiler2** Record in a logbook (written or electronic format) the scenario under which the boilers are operating.	15A NCAC 02Q .0508(j)

State-enforceable only

1. 15A NCAC 02D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS

a. The Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary.

2. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS for Avoidance of 15A NCAC 02D .0530 PREVENTION OF SIGNIFICANT DETERIORATION

a. In order to avoid applicability of this regulation, 15A NCAC 02D .0530(g), facility-wide emission sources shall discharge into the atmosphere less than the limits of nitrogen oxides (NOx), particulate matter (PM), and carbon dioxide equivalent ($CO_{2\ eqv}$) per consecutive 12-month period as provided in the summary table below [15A NCAC 02D .0530]:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Nitrogen oxides	Less than 88.99 tons per consecutive 12-month period	15A NCAC 02Q .0317 for 15A NCAC 02D .0530
Particulate matter	Less than 78.86 tons per consecutive 12-month period	
CO_2 equivalent	Less than 111,529.83 tons per consecutive 12-month period	

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.2 A.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

Production/Operational Limits [15A NCAC 02Q .0508(f)]

c. To ensure compliance with the avoidance limits above, the following production/operational limits shall apply:
   i. The maximum annual combined heat input to all boilers (ID Nos. ES-B1, ES-Boiler2, ES-Boiler3, and ES-Boiler4) shall not exceed 669,731 million Btu per year per consecutive 12-month period using DAQ approved default heating values of:
      (A) 4,500 Btu/lb for wood residue (sawdust) on a wet, as-fired basis for the wood-fired boilers, and
      (B) 140,000 Btu/gallon for the No. 2 fuel oil-fired boiler.
   ii. The annual wood (sawdust) throughput from both wood fuel silos shall not exceed 132,827 tons per consecutive 12-month period sawdust.

Monitoring/Recordkeeping Requirements [15A NCAC 02Q .0508(f)]

d. The Permittee shall keep monthly records in a logbook (written or electronic format) of:
   i. The combined heat input to all boilers using DAQ approved heating values shall be recorded monthly;
   ii. The pounds of boiler fuel (wet wood/sawdust) input for each wood-fired boiler shall be recorded on a monthly basis;
   iii. The gallons of No. 2 fuel oil consumed shall be recorded on a monthly basis;
   iv. The tons of wood (sawdust) throughput from both wood fuel silos on a monthly basis.

e. The Permittee shall calculate and record the monthly heat input for all boilers determined by the following equations and DAQ approved default heating values:
   i. Monthly heat input for all boilers:

$$Total\ monthly\ heat\ input\ for\ all\ boilers = \sum[\text{monthly heat input}](ES-B1, ES-Boiler2, ES-Boiler3, ES-Boiler4)$$

ii. Wood-fired boilers (ID Nos. ES-B1, ES-Boiler2 and ES-Boiler3) calculation for each boiler with default heating value on a wet, as fired basis of 4,500 Btu/lb:

$$\frac{lb\ sawdust\ used}{month} * \frac{4{,}500\ Btu}{lb\ HV} * \frac{million\ Btu}{1{,}000{,}000\ Btu} = heat\ input\ \frac{million\ Btu}{month}$$

iii. No. 2 Oil-fired boiler calculation with default heating value of 140,000 Btu/gal:

$$\frac{gallons\ fuel\ consumed}{month} * \frac{140{,}000\ Btu}{gallon\ fuel} * \frac{million\ Btu}{1{,}000{,}000\ Btu} = heat\ input\ \frac{million\ Btu}{month}$$

NOx emissions

f. Each calendar month, the Permittee shall calculate and record the NOx emissions for the previous month and the previous 12-month period to ensure compliance with Section 2.2 A.2.a. above. Monthly NOx emissions, in tons, shall be calculated as follows:
   i. Consistent with General Condition LL., NOx emissions shall be determined by the following equations and emission factors:
      A. Monthly NOx emissions for all boilers:

$$Total\ monthly\ NOx\ emissions\ for\ all\ boilers = \sum[\text{monthly NOx emissions}](ES-B1, ES-Boiler2, ES-Boiler3, ES-Boiler4)$$

      B. Wood-fired boilers (ID Nos. ES-B1, ES-Boiler2 and ES-Boiler3) calculation for each boiler:

$$heat\ input\ \frac{million\ Btu}{month} * EF\ \frac{lb\ Pollutant}{million\ Btu} * \frac{ton}{2{,}000\ lb} = \frac{tons\ Pollutant}{month}$$

      C. No. 2 Oil-fired boiler (ID No. ES-Boiler4) calculation:

$$\frac{gallons\ fuel\ consumed}{month} * \frac{EF\ lb\ Pollutant}{1{,}000\ gallon} * \frac{ton}{2{,}000\ lb} = \frac{tons\ Pollutant}{month}$$

      D. NOx emissions factors:

Emission Source ID Nos.	Emission Source Description	NOx			
		EF	Units	Control Device Efficiency	Basis
ES-B1	Wood-fired boiler controlled by two multicyclones followed by an electrostatic precipitator	0.22	lb/million Btu	Uncontrolled	US EPA AP-42, Section 1.6, Wood Residue Combustion in Boilers; Table 1.6-2
ES-Boiler2					
ES-Boiler3					
ES-Boiler4	Ultra-low sulfur distillate fuel oil-fired boiler	20	lb/10^3 gallon	Uncontrolled	US EPA AP-42, Section 1.3, Fuel Oil Combustion; Tables 1.3-1

CO_2 equivalent emissions

g. Each calendar month, the Permittee shall calculate and record the CO_2 equivalent emissions for the previous month and the previous 12-month period to ensure compliance with Section 2.2 A.2.a. above. Monthly CO_2 equivalent emissions, in tons, shall be calculated as follows:
   i. Consistent with General Condition LL., CO_2 equivalent emissions shall be determined by the following equations and emission factors:
      A. Monthly CO_2 equivalent emissions for all boilers:

$$Total\ monthly\ \mathrm{CO2}\ \text{equivalent}\ emissions\ for\ all\ boilers = \sum[\text{monthly CO2 eqv emissions}](ES-B1, ES-Boiler2, ES-Boiler3, ES-Boiler4)$$

      B. Wood-fired boilers (ID Nos. ES-B1, ES-Boiler2 and ES-Boiler3) calculation for each boiler:

$$heat\ input\ \frac{million\ Btu}{month} * EF\ \frac{lb\ Pollutant}{million\ Btu} * \frac{ton}{2{,}000\ lb} = \frac{tons\ Pollutant}{month}$$

      C. No. 2 Oil-fired boiler (ID No. ES-Boiler4) calculation:

$$\frac{gallons\ fuel\ consumed}{month} * \frac{0.14\ million\ Btu}{gallon\ fuel} * \frac{EF\ lb\ Pollutant}{million\ Btu} * \frac{ton}{2{,}000\ lb} = \frac{ton\ Pollutant}{month}$$

      D. CO_2 equivalent emissions factors:

Emission Source ID Nos.	Emission Source Description	CO_2 equivalent			
		EF	Units	Control Device Efficiency	Basis
CO_2					
ES-B1	Wood-fired boiler controlled by two multicyclones followed by an electrostatic precipitator	206.79	lb/million Btu	Uncontrolled	US EPA Mandatory Greenhouse Gas reporting rule: Subpart A and C; Tables C-1 and C-2 to Subpart C of Part 98
ES-Boiler2					
ES-Boiler3					
ES-Boiler4	Ultra-low sulfur distillate fuel oil-fired boiler	163.05		Uncontrolled	
CH_4					
ES-B1	Wood-fired boiler controlled by two multicyclones followed by an electrostatic precipitator	0.016	lb/million Btu	Uncontrolled	US EPA Mandatory Greenhouse Gas reporting rule: Subpart A and C; Tables C-1 and C-2 to Subpart C of Part 98
ES-Boiler2					
ES-Boiler3					
ES-Boiler4	Ultra-low sulfur distillate fuel oil-fired boiler	0.0066		Uncontrolled	

Emission Source ID Nos.	Emission Source Description	CO_2 equivalent			
		EF	Units	Control Device Efficiency	Basis
N_2O					
ES-B1	Wood-fired boiler controlled by two multicyclones followed by an electrostatic precipitator	0.0079	lb/million Btu	Uncontrolled	US EPA Mandatory Greenhouse Gas reporting rule: Subpart A and C; Tables C-1 and C-2 to Subpart C of Part 98
ES-Boiler2					
ES-Boiler3					
ES-Boiler4	Ultra-low sulfur distillate fuel oil-fired boiler	0.0013		Uncontrolled	

40 CFR 98 - Subpart A, Table A-1: Global Warming Potentials

CO_2	1
CH_4	25
N_20	298

CO_2 equivalent = [(CO_2 * 1) + (CH_4 * 25) + (N_2O * 298)]

E. The CO_2, CH_4, N_2O emissions are converted to a CO_{2eq} basis by multiplying by their respective global warming potentials (GWP). GWP for CO_2, CH_4, N_2O are 1, 25, 298, respectively. The sum of these 3 values equals CO_2 equivalent:

$$\text{CO2 equivalent} = (\text{CO2} * 1) + (CH4 * 25) + (N2O * 298)$$

Total PM emissions

h. Each calendar month, the Permittee shall calculate and record the PM emissions for the previous month and the previous 12-month period to ensure compliance with Section 2.2 A.2.a. above. Monthly PM emissions, in tons, shall be calculated as follows:
   i. Consistent with General Condition LL., PM emissions shall be determined by the following equations and emission factors:
      A. Monthly PM emissions for all sources:

$$Total\ monthly\ PM\ emissions\ for\ all\ sources = \sum[boilers](ES-B1, ES-Boiler2, ES-Boiler3, ES-Boiler4) + \sum[kilns](ES-KILN-1, ES-KILN-2, ES-KILN-3) + \sum[planer\ mill](ES-PM) + \sum[trim\ saw\ and\ wood\ hog](ES-SH) + \sum[waste\ collection\ system-wood\ fuel\ silos](ES-WCS, ES-WSC-2) + \sum[dry\ wood\ shavings\ truck\ loading](woodwaste) + \sum[Paved\ and\ Unpaved\ Roads](fugutive) + \sum[miscellaneous\ sources](PM\ miscellaneous)$$

      B. Wood-fired boilers (ID Nos. ES-B1, ES-Boiler2 and ES-Boiler3) calculation for each boiler:

$$heat\ input\ \frac{million\ Btu}{month} * EF\ \frac{lb\ Pollutant}{million\ Btu} * \frac{ton}{2{,}000\ lb} = \frac{tons\ Pollutant}{month}$$

C. No. 2 Oil-fired boiler (ID No. ES-Boiler4) calculation:

$$\frac{gallons\ fuel\ consumed}{month} * \frac{EF\ lb\ Pollutant}{1{,}000\ gallon} * \frac{ton}{2{,}000\ lb} = \frac{tons\ Pollutant}{month}$$

D. Kilns (ID Nos. ES-KILN-1, ES-KILN-2 and ES-KILN-3) calculation for each kiln:

$$\frac{MBF}{month} * 0.02231\ \frac{lb\ PM}{MBF} * \frac{ton}{2{,}000\ lb} = \frac{tons}{month}\ PM$$

E. Planer mill (ID Nos. ES-PM) wood waste collection system calculation:

$$1.20\ \frac{lb\ PM}{ODT} * \left(\frac{BF}{month} * 0.2\right) \frac{tons\ woodwaste}{month} * \frac{ton}{2{,}000\ lb} = \frac{tons}{month}\ PM$$

F. Trim saw and wood hog waste collection system (ID Nos. ES-SH) calculation:

$$0.00174\ \frac{lb\ PM\ generated}{BF} * \left(\frac{BF}{month}\right) * \frac{ton}{2{,}000\ lb} * \left(1 - \frac{85}{100}\right) = \frac{tons}{month}\ PM$$

G. Wood (sawdust) collection systems discharging to wood fuel silos (ID Nos. ES-WCS and ES-WCS-2) calculation:

$$1\ \frac{lb\ PM}{ton\ sawdust} * \left(\frac{ton\ sawdust}{month}\right) * \frac{ton}{2{,}000\ lb} * \left(1 - \frac{85}{100}\right) = \frac{tons}{month}\ PM$$

H. Dry wood shavings truck loading (wood waste) calculation:

$$\frac{tons\ wood\ waste\ transferred}{month} * 0.00134\ \frac{lb\ PM}{ton} * \frac{ton}{2{,}000\ lb} = \frac{tons}{month}\ PM$$

I. Paved and unpaved traffic (fugitive) calculation:

$$Paved\ roads\ \frac{VMT}{month} * \frac{lb\ PM\ Paved\ roads}{VMT} * \frac{ton}{2{,}000\ lb} = \frac{tons}{month}\ PM\ Paved\ Roads$$

$$Unpaved\ roads\ \frac{VMT}{month} * \frac{lb\ PM\ Unpaved\ roads}{VMT} * \frac{ton}{2{,}000\ lb} = \frac{tons}{month}\ PM\ Unpaved\ Roads$$

$$Fugitive\ traffic\ emissions = (PM\ Paved\ Roads + PM\ Unpaved\ Roads)\ \frac{tons}{month}$$

J. Tons of PM emissions per month from miscellaneous sources, where applicable

K. Total PM emissions factors:

Emission Source ID Nos.	Emission Source Description	Total PM (filterable + condensable)			
		EF	Units	Control Device Efficiency	Basis as documented and/or presented in application (No. 6200029.19A)
ES-B1	Wood-fired boiler controlled by two multicyclones followed by an electrostatic precipitator	0.107	lb/million Btu	Tested EF - post multicyclones; 90% CE for ESP per AP-42 Chapter 1, Section 1.6.4 Controls	Test 2014-162ST
ES-Boiler2		0.217	lb/million Btu		Test 2014-061ST
ES-Boiler3		0.217	lb/million Btu		Test 2014-061ST and Memorandum dated March 19, 2020 from Gary Saunders, SSCB to Judy Lee, Permits Branch; Review of 2014 Performance Test Results from Boiler 1 and Boiler 2 for Use as Emission Factors for PSD Applicability for New Boiler 3
ES-Boiler4	Ultra-low sulfur distillate fuel oil-fired boiler	3.3	lb/1,000 gallon	Uncontrolled	US EPA AP-42, Section 1.3, Fuel Oil Combustion; Tables 1.3-1 and Table 1.3-2
ES-KILN-1	Steam-heated indirect-fired continuous lumber drying kiln	0.02231	lb/MBF	Uncontrolled	NC DAQ Wood Kiln Emissions Calculator, Revision C (July 2007)
ES-KILN-2					
ES-KILN-3					
ES-PM	Planer mill wood waste collection system	1.2	lb/ODT	EF is post cyclone	NCASI Special Report No. 08-01, May 2088; Table 8.1
ES-SH	Trim saw and wood hog waste collection system	0.001744	lb PM generated/BD-FT	CE for PM is 85%	DAQ and NCASI methodology
ES-WCS	Wood (sawdust) collection system discharging to wood fuel silos controlled by cyclones	1	lb/ton sawdust	CE for PM is 85%	AIRS Database SSC-3-07-008-03
ES-WCS-2					

Emission Source ID Nos.	Emission Source Description	Total PM (filterable + condensable)			
		EF	Units	Control Device Efficiency	Basis as documented and/or presented in application (No. 6200029.19A)
Wood waste	Dry Wood Shavings Truck Loading	0.00134	lb/ton transferred	Uncontrolled	AP-42 Chapter 13, Section 13.2.4
Fugitive	Paved Roads	0.197	lb/VMT	Uncontrolled	AP-42 Chapter 13, Section 13.2.1 Paved Roads and Section 13.2.2 Unpaved Roads
	Unpaved Roads	2.37		CE of 50% for watering roads	

i. The NOx, PM, and $CO_{2\ eqv}$ emissions shall be recorded monthly. The Permittee shall be deemed in non-compliance with this condition and 15A NCAC 02D .0530 if these records are not created and maintained.

j. Each month, the Permittee shall calculate the total combined heat input and the resulting NOx, PM, and $CO_{2\ eqv}$ emissions (facility-wide) for the previous calendar month and the previous consecutive 12-month period using actual production data, emission rates and/or control efficiencies listed above, as appropriate. The Permittee shall be deemed in non-compliance with 15A NCAC 02D .0530 if the monthly production/operational limits and/or emissions are not monitored, calculated and/or if the emissions exceed the NOx, PM, and $CO_{2\ eqv}$ emissions limits and/or production/operational limits in Sections 2.2 A.2.a. and/or 2.2 A.2.c. above.

The above records shall be recorded monthly in a logbook (written or electronic format), maintained on-site and made available to officials of the Division of Air Quality (DAQ), upon request. The Permittee must keep each entry in the log and all required records on file for a minimum of five years. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if these records are not recorded monthly in a logbook (written or electronic format), kept on-site and made available to DAQ personnel upon request.

Reporting Requirements [15A NCAC 02Q .0508(f)]

k. The Permittee shall submit a semiannual summary report of monitoring and recordkeeping activities given in Sections 2.2 A.2.d. through 2.2 A.2.j. above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following:
   i. The monthly heat input to each boiler and the combined heat input to all boilers using DAQ approved default heating values must be calculated for each of the 12-month periods over the previous 17 months;
   ii. The monthly pounds of boiler fuel (wet wood/sawdust) input for each wood-fired boiler for the previous 17 months;
   iii. The monthly gallons of No. 2 fuel oil consumed for the previous 17 months;
   iv. The monthly tons of tons of wood (sawdust) through both wood fuel silos for the previous 17 months;
   v. The monthly NOx, PM, and $CO_{2\ eqv}$ emissions for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months, and
   vi. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 02Q .0508(j): ALTERNATIVE OPERATING SCENARIOS [15A NCAC 02Q .0508(j)]

a. The Permittee, contemporaneously with making a change from one alternative operating scenario to another, while operating the wood-fired boilers **(ID Nos. ES-B1 and ES-Boiler2)** and the No. 2 fuel oil-fired boiler **(ID No. ES-Boiler4)** shall record in a logbook (written or electronic format) the scenario under which it is operating. [15A NCAC 02Q .0508(j)]
   i. *Primary Operating Scenario* is defined as follows:
      1. When both wood-fired boilers **(ID Nos. ES-B1 and ES-Boiler2)** are operating as permitted.
   ii. *Alternative Operating Scenario* is defined as follows:
      2. When the No. 2 fuel oil-fired boiler **(ID No. ES-Boiler4)** is operating as a backup boiler for one of the two wood-fired boilers **(ID Nos. ES-B1 and ES-Boiler2)** for maintenance or servicing.

b. The Permittee shall not operate more than three boilers **(ID Nos. ES-B1, ES-Boiler2 through ES-Boiler4)**, simultaneously.

2.3 Permit Shield for Non-Applicable Requirements

The Permittee is shielded from the following non-applicable requirements [15A NCAC 02Q .0512(a)(1)(B)].

A. 15A NCAC 02D .0524, 40 CFR Part 60 Subpart Dc, is not applicable to existing wood-fired boiler **(ID Nos. ES-B1)** because the boiler pre-dates the NSPS regulation (placed into operation April 1986).

SECTION 3 - GENERAL CONDITIONS (version 5.5, 08/25/2020)

This section describes terms and conditions applicable to this Title V facility.

A. **General Provisions** [NCGS 143-215 and 15A NCAC 02Q .0508(i)(16)]
1. Terms not otherwise defined in this permit shall have the meaning assigned to such terms as defined in 15A NCAC 02D and 02Q.
2. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are binding and enforceable pursuant to NCGS 143-215.114A and 143-215.114B, including assessment of civil and/or criminal penalties. Any unauthorized deviation from the conditions of this permit may constitute grounds for revocation and/or enforcement action by the DAQ.
3. This permit is not a waiver of or approval of any other Department permits that may be required for other aspects of the facility which are not addressed in this permit.
4. This permit does not relieve the Permittee from liability for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted facility, or from penalties therefore, nor does it allow the Permittee to cause pollution in contravention of state laws or rules, unless specifically authorized by an order from the North Carolina Environmental Management Commission.
5. Except as identified as state-only requirements in this permit, all terms and conditions contained herein shall be enforceable by the DAQ, the EPA, and citizens of the United States as defined in the Federal Clean Air Act.
6. Any stationary source of air pollution shall not be operated, maintained, or modified without the appropriate and valid permits issued by the DAQ, unless the source is exempted by rule. The DAQ may issue a permit only after it receives reasonable assurance that the installation will not cause air pollution in violation of any of the applicable requirements. A permitted installation may only be operated, maintained, constructed, expanded, or modified in a manner that is consistent with the terms of this permit.

B. **Permit Availability** [15A NCAC 02Q .0507(k) and .0508(i)(9)(B)]
The Permittee shall have available at the facility a copy of this permit and shall retain for the duration of the permit term one complete copy of the application and any information submitted in support of the application package. The permit and application shall be made available to an authorized representative of Department of Environmental Quality upon request.

C. **Severability Clause** [15A NCAC 02Q .0508(i)(2)]
In the event of an administrative challenge to a final and binding permit in which a condition is held to be invalid, the provisions in this permit are severable so that all requirements contained in the permit, except those held to be invalid, shall remain valid and must be complied with.

D. **Submissions** [15A NCAC 02Q .0507(e) and 02Q .0508(i)(16)]
Except as otherwise specified herein, two copies of all documents, reports, test data, monitoring data, notifications, request for renewal, and any other information required by this permit shall be submitted to the appropriate Regional Office. Refer to the Regional Office address on the cover page of this permit. For continuous emissions monitoring systems (CEMS) reports, continuous opacity monitoring systems (COMS) reports, quality assurance (QA)/quality control (QC) reports, acid rain CEM certification reports, and NOx budget CEM certification reports, one copy shall be sent to the appropriate Regional Office and one copy shall be sent to:

Supervisor, Stationary Source Compliance
North Carolina Division of Air Quality
1641 Mail Service Center
Raleigh, NC 27699-1641

All submittals shall include the facility name and Facility ID number (refer to the cover page of this permit).

E. **Duty to Comply** [15A NCAC 02Q .0508(i)(3)]
The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition except conditions identified as state-only requirements constitutes a violation of the Federal Clean Air Act. Noncompliance with any permit condition is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

F. **Circumvention** - STATE ENFORCEABLE ONLY
The facility shall be properly operated and maintained at all times in a manner that will effect an overall reduction in air pollution. Unless otherwise specified by this permit, no emission source may be operated without the concurrent operation of its associated air pollution control device(s) and appurtenances.

G. **Permit Modifications**
1. Administrative Permit Amendments [15A NCAC 02Q .0514]
The Permittee shall submit an application for an administrative permit amendment in accordance with 15A NCAC 02Q .0514.
2. Transfer in Ownership or Operation and Application Submittal Content [15A NCAC 02Q .0524 and 02Q .0505]
The Permittee shall submit an application for an ownership change in accordance with 15A NCAC 02Q.0524 and 02Q .0505.
3. Minor Permit Modifications [15A NCAC 02Q .0515]
The Permittee shall submit an application for a minor permit modification in accordance with 15A NCAC 02Q .0515.
4. Significant Permit Modifications [15A NCAC 02Q .0516]
The Permittee shall submit an application for a significant permit modification in accordance with 15A NCAC 02Q .0516.
5. Reopening for Cause [15A NCAC 02Q .0517]
The Permittee shall submit an application for reopening for cause in accordance with 15A NCAC 02Q .0517.

H. **Changes Not Requiring Permit Modifications**
1. Reporting Requirements
Any of the following that would result in new or increased emissions from the emission source(s) listed in Section 1 must be reported to the Regional Supervisor, DAQ:
   a. changes in the information submitted in the application;
   b. changes that modify equipment or processes; or
   c. changes in the quantity or quality of materials processed.

If appropriate, modifications to the permit may then be made by the DAQ to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause a violation of the emission limitations specified herein.

2. Section 502(b)(10) Changes [15A NCAC 02Q .0523(a)]
   a. "Section 502(b)(10) changes" means changes that contravene an express permit term or condition. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
   b. The Permittee may make Section 502(b)(10) changes without having the permit revised if:
      i. the changes are not a modification under Title I of the Federal Clean Air Act;
      ii. the changes do not cause the allowable emissions under the permit to be exceeded;
      iii. the Permittee notifies the Director and EPA with written notification at least seven days before the change is made; and
      iv. the Permittee shall attach the notice to the relevant permit.
   c. The written notification shall include:
      i. a description of the change;
      ii. the date on which the change will occur;
      iii. any change in emissions; and
      iv. any permit term or condition that is no longer applicable as a result of the change.
   d. Section 502(b)(10) changes shall be made in the permit the next time that the permit is revised or renewed, whichever comes first.
3. Off Permit Changes [15A NCAC 02Q .0523(b)]
   The Permittee may make changes in the operation or emissions without revising the permit if:
   a. the change affects only insignificant activities and the activities remain insignificant after the change; or
   b. the change is not covered under any applicable requirement.
4. Emissions Trading [15A NCAC 02Q .0523(c)]
   To the extent that emissions trading is allowed under 15A NCAC 02D, including subsequently adopted maximum achievable control technology standards, emissions trading shall be allowed without permit revision pursuant to 15A NCAC 02Q .0523(c).

I.A **Reporting Requirements for Excess Emissions and Permit Deviations** [15A NCAC 02D .0535(f) and 02Q .0508(f)(2)]

"Excess Emissions" - means an emission rate that exceeds any applicable emission limitation or standard allowed by any rule in Sections .0500, .0900, .1200, or .1400 of Subchapter 02D; or by a permit condition; or that exceeds an emission limit established in a permit issued under 15A NCAC 02Q .0700. *(Note: Definitions of excess emissions under 02D .1110 and 02D .1111 shall apply where defined by rule.)*

"Deviations" - for the purposes of this condition, any action or condition not in accordance with the terms and conditions of this permit including those attributable to upset conditions as well as excess emissions as defined above lasting less than four hours.

Excess Emissions

1. If a source is required to report excess emissions under NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or the operating permit provides for periodic (e.g., quarterly) reporting of excess emissions, reporting shall be performed as prescribed therein.

2. If the source is not subject to NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or these rules do NOT define "excess emissions," the Permittee shall report excess emissions in accordance with 15A NCAC 02D .0535 as follows:
   a. Pursuant to 15A NCAC 02D .0535, if excess emissions last for more than four hours resulting from a malfunction, a breakdown of process or control equipment, or any other abnormal condition, the owner or operator shall:
      i. notify the Regional Supervisor or Director of any such occurrence by 9:00 a.m. Eastern Time of the Division's next business day of becoming aware of the occurrence and provide:
         - name and location of the facility;
         - nature and cause of the malfunction or breakdown;
         - time when the malfunction or breakdown is first observed;
         - expected duration; and
         - estimated rate of emissions;
      ii. notify the Regional Supervisor or Director immediately when corrective measures have been accomplished; and
      iii. submit to the Regional Supervisor or Director within 15 days a written report as described in 15A NCAC 02D .0535(f)(3).

Permit Deviations

3. Pursuant to 15A NCAC 02Q .0508(f)(2), the Permittee shall report deviations from permit requirements (terms and conditions) as follows:
   a. Notify the Regional Supervisor or Director of all other deviations from permit requirements not covered under 15A NCAC 02D .0535 quarterly. A written report to the Regional Supervisor shall include the probable cause of such deviation and any corrective actions or preventative actions taken. The responsible official shall certify all deviations from permit requirements.

I.B **Other Requirements under 15A NCAC 02D .0535**

The Permittee shall comply with all other applicable requirements contained in 15A NCAC 02D .0535, including 15A NCAC 02D .0535(c) as follows:

1. Any excess emissions that do not occur during start-up and shut-down shall be considered a violation of the appropriate rule unless the owner or operator of the sources demonstrates to the Director, that the excess emissions are a result of a malfunction. The Director shall consider, along with any other pertinent information, the criteria contained in 15A NCAC 02D .0535(c)(1) through (7).
2. 15A NCAC 02D .0535(g). Excess emissions during start-up and shut-down shall be considered a violation of the appropriate rule if the owner or operator cannot demonstrate that excess emissions are unavoidable.

J. **Emergency Provisions** [40 CFR 70.6(g)]

The Permittee shall be subject to the following provisions with respect to emergencies:

1. An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the facility, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the facility to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.

2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions specified in 3. below are met.
3. The affirmative defense of emergency shall be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that include information as follows:
   a. an emergency occurred and the Permittee can identify the cause(s) of the emergency;
   b. the permitted facility was at the time being properly operated;
   c. during the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the standards or other requirements in the permit; and
   d. the Permittee submitted notice of the emergency to the DAQ within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement specified elsewhere herein.

K. **Permit Renewal** [15A NCAC 02Q .0508(e) and 02Q .0513(b)]
This 15A NCAC 02Q .0500 permit is issued for a fixed term not to exceed five years and shall expire at the end of its term. Permit expiration terminates the facility's right to operate unless a complete 15A NCAC 02Q .0500 renewal application is submitted at least six months before the date of permit expiration. If the Permittee or applicant has complied with 15A NCAC 02Q .0512(b)(1), this 15A NCAC 02Q .0500 permit shall not expire until the renewal permit has been issued or denied. Permit expiration under 15A NCAC 02Q .0400 terminates the facility's right to operate unless a complete 15A NCAC 02Q .0400 renewal application is submitted at least six months before the date of permit expiration for facilities subject to 15A NCAC 02Q .0400 requirements. In either of these events, all terms and conditions of these permits shall remain in effect until the renewal permits have been issued or denied.

L. **Need to Halt or Reduce Activity Not a Defense** [15A NCAC 02Q .0508(i)(4)]
It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

M. **Duty to Provide Information (submittal of information)** [15A NCAC 02Q .0508(i)(9)]
1. The Permittee shall furnish to the DAQ, in a timely manner, any reasonable information that the Director may request in **writing** to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit.
2. The Permittee shall furnish the DAQ copies of records required to be kept by the permit when such copies are requested by the Director. For information claimed to be confidential, the Permittee may furnish such records directly to the EPA upon request along with a claim of confidentiality.

N. **Duty to Supplement** [15A NCAC 02Q .0507(f)]
The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the DAQ. The Permittee shall also provide additional information as necessary to

address any requirement that becomes applicable to the facility after the date a complete permit application was submitted but prior to the release of the draft permit.

O. **Retention of Records** [15A NCAC 02Q .0508(f) and 02Q .0508 (l)]
The Permittee shall retain records of all required monitoring data and supporting information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring information, and copies of all reports required by the permit. These records shall be maintained in a form suitable and readily available for expeditious inspection and review. Any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request.

P. **Compliance Certification** [15A NCAC 02Q .0508(n)]
The Permittee shall submit to the DAQ and the EPA (Air and EPCRA Enforcement Branch, EPA, Region 4, 61 Forsyth Street SW, Atlanta, GA 30303) postmarked on or before March 1 a compliance certification (for the preceding calendar year) by a responsible official with all federally-enforceable terms and conditions in the permit, including emissions limitations, standards, or work practices. It shall be the responsibility of the current owner to submit a compliance certification for the entire year regardless of who owned the facility during the year. The compliance certification shall comply with additional requirements as may be specified under Sections 114(a)(3) or 504(b) of the Federal Clean Air Act. The compliance certification shall specify:
1. the identification of each term or condition of the permit that is the basis of the certification;
2. the compliance status (with the terms and conditions of the permit for the period covered by the certification);
3. whether compliance was continuous or intermittent; and
4. the method(s) used for determining the compliance status of the source during the certification period.

Q. **Certification by Responsible Official** [15A NCAC 02Q .0520]
A responsible official shall certify the truth, accuracy, and completeness of any application form, report, or compliance certification required by this permit. All certifications shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

R. **Permit Shield for Applicable Requirements** [15A NCAC 02Q .0512]
1. Compliance with the terms and conditions of this permit shall be deemed compliance with applicable requirements, where such applicable requirements are included and specifically identified in the permit as of the date of permit issuance.
2. A permit shield shall not alter or affect:
   a. the power of the Commission, Secretary of the Department, or Governor under NCGS 143-215.3(a)(12), or EPA under Section 303 of the Federal Clean Air Act;
   b. the liability of an owner or operator of a facility for any violation of applicable requirements prior to the effective date of the permit or at the time of permit issuance;
   c. the applicable requirements under Title IV; or
   d. the ability of the Director or the EPA under Section 114 of the Federal Clean Air Act to obtain information to determine compliance of the facility with its permit.
3. A permit shield does not apply to any change made at a facility that does not require a permit or permit revision made under 15A NCAC 02Q .0523.

4. A permit shield does not extend to minor permit modifications made under 15A NCAC 02Q .0515.

S. **Termination, Modification, and Revocation of the Permit** [15A NCAC 02Q .0519]
The Director may terminate, modify, or revoke and reissue this permit if:
1. the information contained in the application or presented in support thereof is determined to be incorrect;
2. the conditions under which the permit or permit renewal was granted have changed;
3. violations of conditions contained in the permit have occurred;
4. the EPA requests that the permit be revoked under 40 CFR 70.7(g) or 70.8(d); or
5. the Director finds that termination, modification, or revocation and reissuance of the permit is necessary to carry out the purpose of NCGS Chapter 143, Article 21B.

T. **Insignificant Activities** [15A NCAC 02Q .0503]
Because an emission source or activity is insignificant does not mean that the emission source or activity is exempted from any applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement. The Permittee shall have available at the facility at all times and made available to an authorized representative upon request, documentation, including calculations, if necessary, to demonstrate that an emission source or activity is insignificant.

U. **Property Rights** [15A NCAC 02Q .0508(i)(8)]
This permit does not convey any property rights in either real or personal property or any exclusive privileges.

V. **Inspection and Entry** [15A NCAC 02Q .0508(l) and NCGS 143-215.3(a)(2)]
1. Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow the DAQ, or an authorized representative, to perform the following:
   a. enter the Permittee's premises where the permitted facility is located or emissions-related activity is conducted, or where records are kept under the conditions of the permit;
   b. have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
   c. inspect at reasonable times and using reasonable safety practices any source, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
   d. sample or monitor substances or parameters, using reasonable safety practices, for the purpose of assuring compliance with the permit or applicable requirements at reasonable times.

   Nothing in this condition shall limit the ability of the EPA to inspect or enter the premises of the Permittee under Section 114 or other provisions of the Federal Clean Air Act.
2. No person shall refuse entry or access to any authorized representative of the DAQ who requests entry for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such authorized representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

W. **Annual Fee Payment** [15A NCAC 02Q .0508(i)(10)]
1. The Permittee shall pay all fees in accordance with 15A NCAC 02Q .0200.
2. Payment of fees may be by check or money order made payable to the N.C. Department of Environmental Quality. Annual permit fee payments shall refer to the permit number.

3. If, within 30 days after being billed, the Permittee fails to pay an annual fee, the Director may initiate action to terminate the permit under 15A NCAC 02Q .0519.

X. **Annual Emission Inventory Requirements** [15A NCAC 02Q .0207]
The Permittee shall report by **June 30 of each year** the actual emissions of each air pollutant listed in 15A NCAC 02Q .0207(a) from each emission source within the facility during the previous calendar year. The report shall be in or on such form as may be established by the Director. The accuracy of the report shall be certified by a responsible official of the facility.

Y. **Confidential Information** [15A NCAC 02Q .0107 and 02Q .0508(i)(9)]
Whenever the Permittee submits information under a claim of confidentiality pursuant to 15A NCAC 02Q .0107, the Permittee may also submit a copy of all such information and claim directly to the EPA upon request. All requests for confidentiality must be in accordance with 15A NCAC 02Q .0107.

Z. **Construction and Operation Permits** [15A NCAC 02Q .0100 and .0300]
A construction and operating permit shall be obtained by the Permittee for any proposed new or modified facility or emission source which is not exempted from having a permit prior to the beginning of construction or modification, in accordance with all applicable provisions of 15A NCAC 02Q .0100 and .0300.

AA. **Standard Application Form and Required Information** [15A NCAC 02Q .0505 and .0507]
The Permittee shall submit applications and required information in accordance with the provisions of 15A NCAC 02Q .0505 and .0507.

BB. **Financial Responsibility and Compliance History [**15A NCAC 02Q .0507(d)(3)]
The DAQ may require an applicant to submit a statement of financial qualifications and/or a statement of substantial compliance history.

CC. **Refrigerant Requirements (Stratospheric Ozone and Climate Protection)** [15A NCAC 02Q .0501(d)]
1. If the Permittee has appliances or refrigeration equipment, including air conditioning equipment, which use Class I or II ozone-depleting substances such as chlorofluorocarbons and hydrochlorofluorocarbons listed as refrigerants in 40 CFR Part 82 Subpart A Appendices A and B, the Permittee shall service, repair, and maintain such equipment according to the work practices, personnel certification requirements, and certified recycling and recovery equipment specified in 40 CFR Part 82 Subpart F.
2. The Permittee shall not knowingly vent or otherwise release any Class I or II substance into the environment during the repair, servicing, maintenance, or disposal of any such device except as provided in 40 CFR Part 82 Subpart F.
3. The Permittee shall comply with all reporting and recordkeeping requirements of 40 CFR 82.166. Reports shall be submitted to the EPA or its designee as required.

DD. **Prevention of Accidental Releases - Section 112(r)** [15A NCAC 02Q .0508(h)]
If the Permittee is required to develop and register a Risk Management Plan with EPA pursuant to Section 112(r) of the Clean Air Act, then the Permittee is required to register this plan in accordance with 40 CFR Part 68.

EE. **Prevention of Accidental Releases General Duty Clause - Section 112(r)(1) –** FEDERALLY-ENFORCEABLE ONLY
Although a risk management plan may not be required, if the Permittee produces, processes, handles, or stores any amount of a listed hazardous substance, the Permittee has a general duty to take such steps as are necessary to prevent the accidental release of such substance and to minimize the consequences of any release.

FF. **Title IV Allowances** [15A NCAC 02Q .0508(i)(1)]
This permit does not limit the number of Title IV allowances held by the Permittee, but the Permittee may not use allowances as a defense to noncompliance with any other applicable requirement. The Permittee's emissions may not exceed any allowances that the facility lawfully holds under Title IV of the Federal Clean Air Act.

GG. **Air Pollution Emergency Episode** [15A NCAC 02D .0300]
Should the Director of the DAQ declare an Air Pollution Emergency Episode, the Permittee will be required to operate in accordance with the Permittee's previously approved Emission Reduction Plan or, in the absence of an approved plan, with the appropriate requirements specified in 15A NCAC 02D .0300.

HH. **Registration of Air Pollution Sources** [15A NCAC 02D .0202]
The Director of the DAQ may require the Permittee to register a source of air pollution. If the Permittee is required to register a source of air pollution, this registration and required information will be in accordance with 15A NCAC 02D .0202(b).

II. **Ambient Air Quality Standards** [15A NCAC 02D .0501(c)]
In addition to any control or manner of operation necessary to meet emission standards specified in this permit, any source of air pollution shall be operated with such control or in such manner that the source shall not cause the ambient air quality standards in 15A NCAC 02D .0400 to be exceeded at any point beyond the premises on which the source is located. When controls more stringent than named in the applicable emission standards in this permit are required to prevent violation of the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls.

JJ. **General Emissions Testing and Reporting Requirements** [15A NCAC 02Q .0508(i)(16)]
Emission compliance testing shall be by the procedures of Section .2600, except as may be otherwise required in Rules .0524, .1110, or .1111 of Subchapter 02D. If emissions testing is required by this permit or the DAQ or if the Permittee submits emissions testing to the DAQ to demonstrate compliance for emission sources subject to Rules .0524, .1110, or .1111, the Permittee shall provide and submit all notifications, conduct all testing, and submit all test reports in accordance with the requirements of 15A NCAC 02D .0524, .1110, or ,1111, as applicable. Otherwise, if emissions testing is required by this permit or the DAQ or if the Permittee submits emissions testing to the DAQ to demonstrate compliance, the Permittee shall perform such testing in accordance with 15A NCAC 02D .2600 and follow the procedures outlined below:

1. The owner or operator of the source shall arrange for air emission testing protocols to be provided to the Director prior to air pollution testing. Testing protocols are not required to be pre-approved by the Director prior to air pollution testing. The Director shall review air emission testing protocols for pre-approval prior to testing if requested by the owner or operator at least **45 days** before conducting the test.

2. Any person proposing to conduct an emissions test to demonstrate compliance with an applicable standard shall notify the Director at least **15 days** before beginning the test so that the Director may at his option observe the test.
3. The owner or operator of the source shall arrange for controlling and measuring the production rates during the period of air testing. The owner or operator of the source shall ensure that the equipment or process being tested is operated at the production rate that best fulfills the purpose of the test. The individual conducting the emission test shall describe the procedures used to obtain accurate process data and include in the test report the average production rates determined during each testing period.
4. Two copies of the final air emission test report shall be submitted to the Director not later than **30 days** after sample collection unless otherwise specified in the specific conditions. The owner or operator may request an extension to submit the final test report. The Director shall approve an extension request if he finds that the extension request is a result of actions beyond the control of the owner or operator.
    a. The Director shall make the final determination regarding any testing procedure deviation and the validity of the compliance test. The Director may:
        i. Allow deviations from a method specified under a rule in this Section if the owner or operator of the source being tested demonstrates to the satisfaction of the Director that the specified method is inappropriate for the source being tested.
        ii. Prescribe alternate test procedures on an individual basis when he finds that the alternative method is necessary to secure more reliable test data.
        iii. Prescribe or approve methods on an individual basis for sources or pollutants for which no test method is specified in this Section if the methods can be demonstrated to determine compliance of permitted emission sources or pollutants.
    b. The Director may authorize the Division of Air Quality to conduct independent tests of any source subject to a rule in this Subchapter to determine the compliance status of that source or to verify any test data submitted relating to that source. Any test conducted by the Division of Air Quality using the appropriate testing procedures described in Section 02D .2600 has precedence over all other tests.

KK. **Reopening for Cause** [15A NCAC 02Q .0517]

1. A permit shall be reopened and revised under the following circumstances:
    a. additional applicable requirements become applicable to a facility with remaining permit term of three or more years;
    b. additional requirements (including excess emission requirements) become applicable to a source covered by Title IV;
    c. the Director or EPA finds that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or
    d. the Director or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
2. Any permit reopening shall be completed or a revised permit issued within 18 months after the applicable requirement is promulgated. No reopening is required if the effective date of the requirement is after the expiration of the permit term unless the term of the permit was extended pursuant to 15A NCAC 02Q .0513(c).
3. Except for the state-enforceable only portion of the permit, the procedures set out in 15A NCAC 02Q .0507, .0521, or .0522 shall be followed to reissue the permit. If the State-enforceable only portion of the permit is reopened, the procedures in 15A NCAC 02Q .0300 shall be followed. The proceedings shall affect only those parts of the permit for which cause to reopen exists.

4. The Director shall notify the Permittee at least 60 days in advance of the date that the permit is to be reopened, except in cases of imminent threat to public health or safety the notification period may be less than 60 days.
5. Within 90 days, or 180 days if the EPA extends the response period, after receiving notification from the EPA that a permit needs to be terminated, modified, or revoked and reissued, the Director shall send to the EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate.

LL. **Reporting Requirements for Non-Operating Equipment** [15A NCAC 02Q .0508(i)(16)]
The Permittee shall maintain a record of operation for permitted equipment noting whenever the equipment is taken from and placed into operation. When permitted equipment is not in operation, the requirements for testing, monitoring, and recordkeeping are suspended until operation resumes.

MM. **Fugitive Dust Control Requirement** [15A NCAC 02D .0540]
As required by 15A NCAC 02D .0540 "Particulates from Fugitive Dust Emission Sources," the Permittee shall not cause or allow fugitive dust emissions to cause or contribute to substantive complaints or excess visible emissions beyond the property boundary. If substantive complaints or excessive fugitive dust emissions from the facility are observed beyond the property boundaries for six minutes in any one hour (using Reference Method 22 in 40 CFR, Appendix A), the owner or operator may be required to submit a fugitive dust plan as described in 02D .0540(f).

"Fugitive dust emissions" means particulate matter from process operations that does not pass through a process stack or vent and that is generated within plant property boundaries from activities such as: unloading and loading areas, process areas, stockpiles, stock pile working, plant parking lots, and plant roads (including access roads and haul roads).

NN. **Specific Permit Modifications** [15A NCAC 02Q .0501 and .0523]
1. For modifications made pursuant to 15A NCAC 02Q .0501(b)(2), the Permittee shall file a Title V Air Quality Permit Application for the air emission source(s) and associated air pollution control device(s) on or before 12 months after commencing operation.
2. For modifications made pursuant to 15A NCAC 02Q .0501(c)(2), the Permittee shall not begin operation of the air emission source(s) and associated air pollution control device(s) until a Title V Air Quality Permit Application is filed and a construction and operation permit following the procedures of Section .0500 (except for Rule .0504 of this Section) is obtained.
3. For modifications made pursuant to 502(b)(10), in accordance with 15A NCAC 02Q .0523(a)(1)(C), the Permittee shall notify the Director and EPA (EPA - Air Planning Branch, 61 Forsyth Street SW, Atlanta, GA 30303) in writing at least seven days before the change is made. The written notification shall include:
   a. a description of the change at the facility;
   b. the date on which the change will occur;
   c. any change in emissions; and
   d. any permit term or condition that is no longer applicable as a result of the change.

In addition to this notification requirement, with the next significant modification or Air Quality Permit renewal, the Permittee shall submit a page "E5" of the application forms signed by the responsible official verifying that the application for the 502(b)(10) change/modification, is true, accurate, and complete. Further note that modifications made pursuant to 502(b)(10) do not relieve the Permittee from satisfying preconstruction requirements.

OO. **Third Party Participation and EPA Review** [15A NCAC 02Q .0521, .0522 and .0525(7)]
For permits modifications subject to 45-day review by the federal Environmental Protection Agency (EPA), EPA's decision to not object to the proposed permit is considered final and binding on the EPA and absent a third party petition, the failure to object is the end of EPA's decision-making process with respect to the revisions to the permit. The time period available to submit a public petition pursuant to 15A NCAC 02Q .0518 begins at the end of the 45-day EPA review period.

ATTACHMENT

List of Acronyms

AOS	Alternative Operating Scenario
BACT	Best Available Control Technology
BAE	Baseline Actual Emissions
Btu	British thermal unit
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEM	Continuous Emission Monitor
CFR	Code of Federal Regulations
CSAPR	Cross-State Air Pollution Rule
DAQ	Division of Air Quality
DEQ	Department of Environmental Quality
EMC	Environmental Management Commission
EPA	Environmental Protection Agency
FR	Federal Register
GACT	Generally Available Control Technology
GHGs	Greenhouse Gases
HAP	Hazardous Air Pollutant
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
NAA	Non-Attainment Area
NAAQS	National Ambient Air Quality Standards
NCAC	North Carolina Administrative Code
NCGS	North Carolina General Statutes
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_X	Nitrogen Oxides
NSPS	New Source Performance Standard
NSR	New Source Review
OAH	Office of Administrative Hearings
PAE	Projected Actual Emissions
PAL	Plantwide Applicability Limitation
PM	Particulate Matter
$PM_{2.5}$	Particulate Matter with Nominal Aerodynamic Diameter of 2.5 Micrometers or Less
PM_{10}	Particulate Matter with Nominal Aerodynamic Diameter of 10 Micrometers or Less
POS	Primary Operating Scenario
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
RACT	Reasonably Available Control Technology
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
TAP	Toxic Air Pollutant
tpy	Tons Per Year
VOC	Volatile Organic Compound